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STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

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☞ The *Mechanical Engineering* department of this paper will be under the charge of Mr. ZERAH COLBURN.

PRINCIPAL CONTENTS.

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, August 27, 1853.

Railroad to the Pacific.

The subject of a railroad to the Pacific is exciting a constantly increasing attention in every part of the country. The necessity for such a work is felt by all, while the desire to secure its construction over some one of the numerous routes proposed, gives rise to a very warm *local* interest in the Southern and Western States. To be placed on the great route of commerce between the Atlantic and Pacific coasts, and, as some believe, between Europe and Asia, is too great an advantage not to be the object of the most strenuous effort. While the general interest in this subject, therefore, is becoming stronger and stronger, in particular sections of the country, it is fast gettiug up to a fever heat. This interest will soon manifest itself at the next session of Congress, and the above project will undoubtedly become the most exciting topic that will come before that body.

There are no doubt several *practicable* routes for a railroad across the continent. Those chiefly claiming public attention, are the *South Pass* route, the more *Central*, advocated by Mr. Benton, which penetrates the mountains near the head waters of the *Arkansas*, and the *Southern* route through Texas, and New, and perhaps through a portion of Mexico, proper. All these routes have their advocates, by whom they are claimed to be superior to the other. A fourth route may be shown to exist through the explorations of Gov. Stevens of the new Territory of *Washington*, by the head waters of the Missouri river. His researches will be very likely to show a favorable route as far as grades are concerned, as upon the high northern latitudes pursued by him, the whole country seems to expand into one vast plain. But however it may be as to the extreme northern route, we believe it to be pretty well settled that *three* feasible ones exist, one of which must be selected for the proposed road.

The route eventually to be adopted will, we will assume, be the one best adapted to accomplish the objects chiefly in view:—the convenience of the commercial classes, and cost of construction.—These are the considerations that alone should influence the question of *location*. We are yet without the evidence necessary to determine this point, and to claim superiority for one route over another, is simply begging the question. The most extensive and thorough explorations, accompanied by the most accurate surveys, are necessary to decide the question of superiority between the several routes proposed. When this point shall be settled others of paramount importance, perhaps, will still have to be disposed of, involving the question of convenience of travel and commerce—to accommodate which is the great end and aim of the road. It may by no means follow, that because a route is the shortest and least expensive, it is to be preferred. Other objects may entirely outweigh considerations like these.

As before stated, we have no sufficiently accurate knowledge of the physical characteristics of the various routes, to determine which are entitled to the preference. This knowledge is to come from the results of future explorations. Our information thus far, rests chiefly upon the observations of *voyageurs*, whose impressions exact surveys may prove to have been very erroneous. Mr. Benton even goes so far as to argue in favor of the route proposed by him, from the fact that it is the one pursued by *wild* animals in their migrations from east to west. Till we have better evidence, our opinions must be made up upon such as we can get. We are soon to have something more tangible than mere *conjecture*. Engineering parties, under the direction of the general government, are now actively at work, and by the commencement of the next session of Congress we shall probably have a large and valuable accession to our present stock of information.—These surveys will undoubtedly be prosecuted with vigor till their object shall be fully attained.

When the physical characteristics of the various routes shall have been settled, the more difficult question of commercial consideration will then come up. In the former case there is no room for *opinion*. In the latter we have little more than opinion upon which to base our conclusions; for although the present routes of commerce and travel may be well determined, it will be claimed that their direction has been given to them from the necessity of the case, and from the want of suitable avenues, the construction of which will entirely change the existing order of things; In deciding the question of route, therefore, based upon the argument of commercial uses, or convenience, a real or fancied interest in the *result*, will probably exert a paramount influence. What is for the interest of the representative, by a very natural process will be believed to be the interest of the *constituent*, and the question of route will be much more apt to be decided upon the principle of the *majority*, than upon the real *merits* of the case.

In the discussion of this subject before congress, the following will be likely to be insisted as the immediate termini, or starting places for the proposed road; viz: *Chicago, St. Louis and Memphis*, or more probably *New Orleans*, for the extreme southern route. Should the South Pass be adopted the interests of the two former may be made to coincide. As far as the great eastern commercial cities, and a majority of our railroads, are concerned, Chicago would seem to be the convenient point of starting for the Pacific. Toward this city tend all the great lines of railroad running west from Boston, New York, Philadelphia and Balti-

more. It has the advantage of being accessible from the sea for a large class of sailing vessels, and freight can probably be laid down there cheaper than at any other point in the interior, at equal distance from the seaboard. But these are merely thrown out as suggestions, which may be entirely outweighed by considerations in favor of the other points named.

It is at present supposed that the general government must in some way become party to this work, from its national importance, and vast cost, which is regarded as too great for *individual* enterprize. The greater portion of the line of the road will run through territory belonging to the United States, and which are uninhabited. There will certainly be a strong opposition to the government aiding the project, except by grant of lands, from constitutional objections. But these we are satisfied must come from a small minority. Such an obvious necessity for the action of government generally is apt to override all theoretical or technical objections.

We question the expediency of having the general government directly connect itself with such a work upon other grounds; for the reason that it can be built without its aid, and having *purely* a *commercial* character, it should be left entirely to private enterprise. In the first place, the general government is incompetent to properly construct and to superintend a railroad, and particularly one of such magnitude as the proposed, and as only one line of road would be attempted to be constructed by it, its action would undoubtedly create great dissatisfaction in other parts of the country, not equally favored. We are satisfied that at least one road would be constructed by the private capital of the country, with such aid as the general government might properly bestow in liberal grants of land, and contracts for the transportation of government property and mails. The task is not so formidable as might be supposed. The distance from the Mississippi to the Pacific coast must be something less than two thousand miles. Now this is less than *three* times the length of the Illinois Central railroad, a work which is being entirely built upon a credit based upon the value of 2,500,000 acres of wild land. It is expected that in this instance the proceeds of the lands will reimburse the debt of the company, leaving the stock of the road a *bonus* to its owners. Estimating the Pacific road to cost *six* times as much as the Illinois Central railroad, let congress grant, if necessary, *ten* times as much land as was granted to the Illinois road, and here is at once a basis for a credit sufficient to build a railroad to the Pacific. We have no doubt that should government make an appropriation of 20,000,000 acres of land to a responsible company who would undertake to construct a railroad from some point on the Mississippi river, in the state of Iowa, for instance, that in six months the means necessary for this purpose could be secured. We name some point in Iowa, *assuming* a route substantially based upon Lake *Michigan* to be the route best adapted to the commercial wants of the country. Such however may not be the case. The selection of route should be left to the judgment of private interest, having in view the physical characteristics of the various ones proposed. If more than *one* road can be built at the same time, let government extend the same encouragement to more than one, or to all that are proposed. Treat all with the same partiality, and then leave the choice of route to the sagacity of private interests. We feel assured in such case that there would be little danger of an unwise choice of route, or that the road would not be much better and more economically built, and managed in a manner more conducive to the interests of the public, than it would be in the hands of the government. The rates of charges may be regulated by *law*, but we should be content to leave them to the discretion of the company, believing that their interests and those of the public exactly harmonize, and would be made to do so in time.

We have in this country nearly 15,000 miles of railroad in operation, and by the first day of January, 1855, we shall have more than 20,000; all of which, with one or two exceptions, have been the work of private companies. To say, therefore, that with our vastly increased means, with the strength that $600,000,000 invested in our roads would give, with the aid in lands that government might extend, and above all the *eclat* that would be thrown around a work which was to carry us forward to the *Pacific*, a work of only 2000 miles, and involving an outlay of not more than $100,000,000, less than three times the cost of the Erie railroad, is beyond the ability of our whole people in their private capacity, so to term it, is what we are not disposed to admit. In fact we believe its accomplishment to be an easy task. It was impossible *five* years since; but the progress we have made, and the confidence which we have acquired during that time, now renders the achievement a comparatively easy one. It *is* practicable by private enterprise, and we never desire to see government attempt any work which is possible for private enterprise to accomplish.

We hope in the execution of the above project, wise councils will prevail. The *people* have been equal to the work of covering the country with railroads. They certainly are no less able to repeat what they have already done, and much more, to construct a railroad to the Pacific, the magnitude of which, measured either by its length or cost, will not equal a *tithe* of what they have already achieved.

Indiana and Illinois Central Railway.

The Board of Directors of this Company met at Decatur, Ills., on the 10th of August, and confirmed a contract for the construction and equipage of the entire line from Indianapolis to Decatur, with Messrs M. C. Story & Co., of New York. The contractors furnish 70 per cent, of the entire amount necessary to construct and equip the road, only requiring the company to raise 30 per cent. Twenty-two thousand dollars per mile includes every thing, except ballasting, and the work is to be completed by the 1st of December, 1855. Before the work can be commenced, however, about $300,000 of additional stock must be raised at home.

The Oakland and Ottawa Railroad.

The iron for this road is bought—the right of way for most of it is secured, and the contract for its construction entered into. These things make the completion of the road certain. The necessary stock has been taken, and we are informed that the laborers to build the road will in a few days be at work at different parts along the line.

Banks and Banking.

The object and office of *money* is to assist in the transfer of other kinds of property from one person to another. Familiar illustrations are used to show this office:—a *hatter* wishes to purchase a barrel of flour; but as the flour merchant does not want *hats* in return, the former will look about for some article that he does want. If he cannot get the exact thing, he will endeavor to exchange his hats for something that the *merchant* can exchange for the object of *his* desires; and as gold and silver are proved by universal experience, to be more common objects of desire than any other values whatever, and as it is found that men, as a general rule, stand ready to exchange whatever they have for them, the hatter, whom we make to represent all who have anything to sell, will naturally seek to turn his products into the precious metals, because he is certain with these to straightway possess himself with that of which he stands in need.

We have briefly stated the causes that led to the adoption of gold and silver as a circulating medium. It was not the result of a conventional agreement. The custom which prevails is based upon *natural* laws, which precede all *conventions*. Gold and silver, from their uses, are regarded, and properly, as the most valuable of all material substances, and their use as *money* results from a desire to convert what has a *limited* and *circumscribed*, into more *general* and *universal* values; into articles that every body is sure to want, under all circumstances. A hatter with a basket of hats under his arm, might starve for the lack of a customer; but as soon as he has exchanged his wares for *gold and silver*, he has the key that unlocks every body's treasures, to his desires.

It is easy to see, however, that where gold and silver are employed as a *medium* between buyer and seller, they are in one sense so much *dead* capital. So employed, they are not *productive* property. This will be seen from the fact, that could we dispense with their use, and send the amount now employed as *money* out of the country, and bring back in return provisions, and instruments of labor, we should in this way convert *unproductive* into *productive* capital, and be so much richer by the transaction.

By the use of credits we are enabled partially to achieve such a result; to dispense with the use of gold and silver in many of the transactions of business, and effect a large saving by their disuse. The saving effected by the use of credits may be well shown by the following illustration. A *Cotton* manufacturer in Massachusetts sends his fabrics to a jobber in New York for sale, who parcels them out to smaller dealers all over the United States. Before they finally reach the consumer they may have passed through a half a dozen hands. These different persons are the mediums for conveying the goods from the *manufacturer* to the *consumer*. Were each of the several transfers which are made accompanied by the delivery of an equal value of gold and silver from one party to the other, it is easy to see that values, exceeding five or six times that of the property sold, must be used to effect its various transfer, adding largely to the cost of the transactions, and diminishing the profits of the manufacturer, and increasing the cost to the consumer. But supposing in each case a credit to be extended to all the parties, till the one immediately in contact with the *consumer* shall have

collected from him the value of the article, and shall have returned it through the same channels through which the goods had been received, a very considerable saving, it is plain to see would be effected.

Now in business, the reason of credits is founded upon the saving effected in the manner stated. When *legitimately* used they are confined to transactions of the character described. Their *abuse* consists in extending them to parties who are not the mere channels of communication between the producer and consumer, but to persons who use these credits as *property*, and make them the *basis* of business operations.

Many of the most important transactions of business are not only effected by the use of *credits*, but even when the interposition of money becomes necessary, we use the *symbol* instead of the *substance*, and in this manner dispense almost entirely with the actual use of gold and silver. We use the *symbol* because it costs less than that for which it stands. Paper money is supposed to be a mere representation of actual value which stand behind it, and into which it can be changed at the option of the party holding it, and it is the belief that it can be instantly converted into gold and silver that causes it to be taken as money.

Now without going into a discussion as to the ratio that should exist between the amount of gold and silver held by a bank, and the amount of *paper* money in circulation, or issued, and questions of a similar character ,which might well fill volumes, instead of columns in our *Journal*, we would state that the expediency of issuing symbols of value is sanctioned by experience, and is one of the most marked characteristics of modern commerce, and is one of the principal causes of its wonderful progress and expansion. To dispense with its use would strike a serious blow on the prosperity of our country would be felt alike by all classes, by the consumer as well as the producer, by the poor and laboring man as well as the rich one.

With these remarks we come to the leading object of this paper, which is to show the *legitimate* office and duty of *Banks* of discount. They supply a *credit* which takes the place of gold and silver, in the purchase and sale of property. Their issues therefore should bear a precise ratio to the extent of the business operations of the community in which they are situated; or to speak more directly, to the healthy or necessary movement of *property* from one person to another. Money has no other object than this, and should there be at any time an amount of the precious metal existing in the shape of money, in excess of the wants of business, the surplus would be either exported, or turned to other uses equally beneficial. When there is an *excess* of paper money, on the other hand, we treat it for the time being, as we do our excess of gold and silver, and make it the *basis* of, when it is only fitted to serve as an *instrument*, in business operations. When therefore, the issues of banks are in excess of the wants of business, an *apparent* value is created, which, treated as a substantial one, becomes the basis of other transactions not warranted by the condition of the community or individuals, and which often ends in ruin to both. The *credit* which was treated as *capital*, is suddenly withdrawn, and men who supposed themselves rich to day, find themselves poor to-morrow, and all suffer more or less by a general depreciation of property. Should there be an excess of gold and silver currency, we send it abroad, and import in return other values; but an excess of paper money only leads us to contract debts without supplying the means of payment.

For the reasons enumerated it is considered a fundamental principle of good banking to discount none but business paper; paper that represents a regular business operation; a transfer of property from one hand to another. So long as this rule is pursued, banks harmonize with, and advance the general prosperity of the country. They are in fact one of the great causes of its prosperity, promoting the advantage of the poor as well as rich. They supply a credit which enables us to dispense with an equal amount of *real* value, which we use for other purposes. So long, therefore as banks confine themselves to discounting paper taken in the regular and ordinary course of business, they are exercising their proper and legitimate function. The moment they exceed this limit they become the great promoters of speculation and extravagance, and may, as they did in 1837, involve the entire business community in ruin.

There is no doubt that in this community the principles of sound banking are but little understood. Our banks loan, and loan all they can, for the sake of making money. Many of them as readily loan on a *fancy* stock as upon a note taken for a cargo of sugar. The consequence is that speculators being able to get money "on easy terms," as the phrase is, blow their bubbles to an enormous extent. By and by the banks themselves cannot keep up their *credits*, are forced to take in their issues, to make good their promises by redeeming the *symbols* of, with *real*, money. For a period longer or shorter they find themselves unable to grant any facilities or *credits*. Business relations of all kinds are disturbed. *Fancies* collapse, and the value of the aggregate property of such a community as New York, may be reduced $20,000,000 in a day; all from a vicious principle in banking. Witness the recent pressure for money and the decline of stocks in the New York market, under the curtailment of the excessive issues of our city banks.

We hear a great deal said in praise of the New York Free Banking Law, which is a general object of imitation by other States. It may have its excellencies, but we believe it peculiarly calculated to promote the abuses we have pointed out. It is generally supposed that because the bill-holders are made safe by it, the business of banking cannot be over done. This is a grand mistake. The security which the law requires to be deposited in the archives of the State is one of the principal reasons why banking *is* overdone.—The banks feel compelled to make large loans to enable them to pay a good interest on the amount invested. They therefore issue and keep in circulation as many bills as possible, irrespective of the wants or demands of business. Had the law required all the banks in the State to have made their bills *par* in the city of New York, it would have effected a greater good than any provision in it. It would have been impossible for country banks to have kept up a circulation in excess of the wants of the community in which they were situated. As it is, their issues are not even *paper* money, and can be made such only by a large discount. The bills of a country bank 20 miles from New York are at double the discount in this city, as are the bills of the most remote bank in New England, for the redemption of which there is in fact no legal security, and about whose affairs nothing whatever is known. The cause of this singular state of things is, that by a mutual arrangement, *all* the New England banks make their bills *par* in Boston, and they are received by all the banks in the payment of notes with equal favor as their own bills. This arrangement renders it impossible for any country bank to keep in circulation a larger number of bills than are needed to meet the immediate business wants of the community, as all excess is immediately sent to Boston, and in the natural course of trade goes into the city banks, and those issuing them are at once called upon to take them up. In this manner the issues of banks are restrained to the limits of the business wants of the community. A sound system of banking is the result, with complete safety to the bill holder, as experience proves, by the operations of business, rather than by any legislative enactment, and which renders the bills of the New England banks a much more desirable circulating medium to our people even, than the bills of our country banks, which are secured beyond a peradventure.

Excursion.

New Jersey Locomotive and Machine Company.—Last Friday, 19th inst., the proprietors of the New Jersey Locomotive and Machine Company went with their operatives, numbering some 300, men and boys, on an excursion to the Crystal Palace.

They left Paterson in the regular train at 7 40 A. M., after marching in procession through the streets with a band of music and several appropriate Banners and also a miniature Locomotive and Tender, a very neat little thing, made and presented to them by Mr. Lane, of Paterson.

The Engine "R. L. Colt." which drew the train, was built by their company for the New York & Erie Railroad, in the incredibly short space of 18 working days after they received the order. She was built in a great hurry for a freight engine, to run on the narrow gauge between New York and Paterson. She is, however, run with the passenger trains and makes her time with perfect ease. The Railroad Company are much pleased with her, she having proved an excellent engine in every respect and very economical, having cost but little for repairs since she was built, which was in March last.

The men having arrived in Duane street marched to the 6th Avenue cars, prepared for them in College Place, and proceeded to the Crystal Palace. Here they spent five hours in a quiet and orderly manner, being known by the badge which they wore upon the occasion. They scattered themselves about the Palace and proved themselves by the interest they manifested in the works of Art of every description there collected from every quarter of the Globe, a very intelligent body of men, and capable of appreciating works of a high order of talent and skill.

At 3½ o'clock they returned by the 6th Avenue cars to Chambers street and thence marched to the Ferry. After landing in Jersey City they marched in procession through several of the streets giving an example of what might be ex-

pected of the Jersey City folks when they get their Locomotive works in operation. If Jersey City turns out as fine a body she need never be ashamed of them.

They all went up to Paterson at 5¼ o'clock and arriving there partook of a most excellent dinner prepared by Mr. Luce, proprietor of Congress Hall, which gave general satisfaction, and was abundantly tested by the men who lacked no appetite after the fatigue of a very long day of enjoyment.

The whole expense was borne by the Company, and they deserve much praise for their disinterested act of kindness and magnanimity. The whole affair was got up in a spirit of good will and without any taint of selfishness.

After dinner several appropriate toasts were given, and several neat and appropriate speeches were made, of which Labor of course was the theme. It would indeed seem as though things had wonderfully changed since the days of Henry VIII and the Field of the Cloth of Gold.—Then Nations and Monarchs met for the display of Pride and Extravagance; now they meet to build and fill Palaces with works of Industry and Art, and Labor is honored before all things. Labor is becoming honorable and respected, instead of being regarded as mean and degrading.

The New Jersey Locomotive and Machine Company went into operation under their charter in April 1851. Since that time they have built 52 Locomotives. The works have been under the management of Mr. John Brandt since the fall of 1851, and it is no more than fair to say that *all* the Engines built under his management are of the very first order. Mr. Brandt has been connected with several railroads as Superintendent of Motive Power, and having entire control of that department for about 19 years, or almost from the first introduction of Railroads into the country.—He left the New York and Erie Rail Road in September 1851 and was presented by the "employees" of that road with a splendid service of plate costing about $800—as a testimonial of their esteem.

The Engines built by this Company are models of durability, being built in the most seviceable manner to stand the wear which they must necessarily receive. They are always built of the best materials, selected and tested with the greatest care, no cheap materials are ever used, and any inferior articles invariably rejected.

The various roads which have their engines in use always give them the highest enconiums and say they have no superiors. They will turn out 30 engines this year.

Paterson has four Locomotive shops turning out among them all some 13 or 14 Engines a month, and the Engines made there, for service, economy and beauty, will compare well with the whole world.

The oldest establishment in the town of the kind is that of Rogers, Ketchum & Grosvenor, which commenced making locomotives about 15 years ago. The next is the New Jersey Locomotive and Machine Company, having been in operation under a partnership, since 1845. Wm. Swinburne & Co., and Danforth, Cooke & Co., are of more recent date, having been established one and two years.

Paterson has now a population of about 16,000, and owes its present prosperity mainly to this branch of business.

The New Jersey Locomotive and Machine Co., made five superior, large, full crank Engines, for the Ontario, Simcoe & Huron Railroad Company of Canada, this year. They are almost the only engines which have yet crossed the Lakes or St. Lawrence into Canada. There is now a Locomotive shop in Toronto but it is limited in capacity and will not be able probably to make anything like the number of Engines which will be needed in Canada the next few years, especially should the Grand Trunk line be successfully carried on. The duties of 12½ per cent are however greatly in favor of such establishments there, and with the freight, a great impediment in the way of American builders. The English builders, however, have more freight and the same duties to pay, so that Canada must get many of her Engines here for years to come. They have a great inducement to do so in those they have received from this Paterson Company, as they are of very superior workmanship, built on scientific principles, and strong, serviceable machines.

One thing, it is to be hoped, this Company will adhere to, and other Companies follow their example, which is to give their engines at the time they contract to deliver them. We believe they are never behind their time, and this is a matter of great importance, much more so than people are generally aware of, in all business transactions, except paying notes. In that every business man is up to the mark. If Rail Road Companies cannot get their Engines in time, they cannot build their roads in the time promised, they cannot do their business promptly any more than the monied man can fulfil his promises if his papers be not cashed at maturity. Let "Promptness" be the universal motto in every business.

Another Connection with the Mobile and Ohio Railroad.

We learn, says the Mobile Advertiser, by a letter from Hickman, Kentucky, that a company was formed at that place on the 20th ultimo, for the purpose of constructing a branch railroad from Hickman, Kentucky, to intersect the Mobile and Ohio Railroad in Obion county, Tenn., at the point where the Northwestern Railroad from Nashville to the Mississippi river intersects or crosses our great trunk railroad. We learn that a sufficient amount of stock has been subscribed, to grade the whole line of route, and prepare it for the iron, and there can be no doubt of its early construction.

The following named gentlemen have been chosen Directors of the Company: S. Burrows, President; O. F. Young, Jeseph Keith, E. B. Fugua, Gen. Robert Matson, U. D. Kingman, A. J. Thomas, J. Edmonston, and Gen. G. W. Gibbs.

It is understood to be the ultimate design of the company to make an early extension of this road to St. Louis via Iron Mountain, thus connecting by railway the South and Southeast with the great Northwest.

Every additional connection with the Mobile and Ohio Railroad increases its prospects of business, and of course by so much appreciates the value of its stock. Our readers will see at a glance that the construction of the road above described will be not only a benefit to the railroad, but to the city also, by making a large additional area of rich and productive territory measurably tributary to this port. We hope the enterprise may be carried forward to successful completion.

Illinois Central Railroad.

The president of the Illinois Central railroad company has made a communication to the board of directors of that company, detailing the present condition of the company and its progress, from which we give the following extracts:

Receipts and Expenditures to Aug. 1, 1853.

RECEIPTS,

Capital Stock.		
Cash applicable to stock		$1,625 00
$20 per share on 10,000 shares	$200,000 00	
$10 per share on 10,000 shares	100,000 00	
$5 per share on 89,293 shares	446,465 00	
		$746,465 00
Construction Bonds.		
To contractors and others at par	650,500 00	
To subscribers, $4,000,000 loan	1,289,000 00	
To subscribers to $3,000,000 loan	322,500 00	
To parties on special contract	436,000 00	
Instalments on $4,000,000 loan, for which bonds are to be issued	158,839 89	
Instalments on $3,000,000 loan, for which bonds are to be issued	425,300 00	
Instalments on $5,000,000 London loan	2,912,977 74	
		6,195,117 63
Exchange.		
Premium on bills, etc.		85.241 27
Bills and accounts payable		812,076 78
Total receipts		$7,840,525 68

EXPENDITURES.

Charter Expenses.		
Prior to organization of company	$51,299 00	
Company Expenses.		
Salaries, counsel fees, etc., etc	106,745 82	
Land.		
Land damages, right of way, etc	507,010 70	
Engineering.		
Surveys, maps, profiles etc	219,387 81	
Construction Account.		
Graduation, masonry, bridging, etc., etc	3,344,283 47	
Iron Rails.		
Including transportation to Illinois	1,839,859 03	
Equipment of engines, cars, etc	87,791 05	
Commissions	202,323 71	
Balance of interest account	99,516 36	
Total expenditures		$6,458,216 45

ON HAND.

Cash deposits and bills receivable		1,382,309 23

WAYS AND MEANS.

Capital..$17,000,000	Assumed cost.	$17,000,000
Capital Stock.		
First instalment of $5 per share on 60,882 shares		$301,910 00

Construction Bonds.

To be issued at par for rails on contracts.	464,500 00		
For earth work and other contracts....	670,000 00		
		1,184,500 00	
Remaining instalments on subscriptions to loan on 7 per cent. bonds for.	4,000,000 00		
Paid to Aug. 1, 1853...	1,447,839 89		
		2,552,160 11	
Remaining instalments from London loan on 6 per ct. bonds of.....	5,000,000 00		
Paid to Aug. 1, 1853...	2,912,977 74		
		2,087,022 26	
Remaining instalments on loan of June 15, 1853, 7 per cent bonds of.....	3,000,000 00		
Paid to Aug. 1, 1853...	747,800 00		
		2,252,200 00	
Remaining payments on bonds sold by special contract of..	900,000 00		
Paid to Aug. 1, 1853...	436.000 00		
		464,000 00	
			8,489,882 37

Exchange.

Premium on Foreign Bills.....	41,740 44		
Premium on Domestic Bills.....	110,000 00		
			151,740 44

Cash.

On hand in deposit and bills receivable.....		1,382,809 23	
Less bills & accounts payable..		812,076 78	
		570,232 45	
Less Illinois state deposit appropriated to interest fund of...		200,000 00	
			370,232 45
Total means now provided.....			$9,313,765 26
Add expenditures to Aug. 1, 1853..			6,458,216 45
Total provision for cost of road...			$15,771,981 71

It is assumed that the total cost of the road and equipment, when complete, will be $17,000,000, which includes, in addition to the detailed estimates of the Engineer, a liberal allowance for interest on the bonds during the construction of the road, and also for contingencies not anticipated or estimated. Nothing has occurred in the progress of the work to induce a belief that this estimate will be exceeded, unless the development of the business upon the portions of the rood before its full completion, shall demonstrate the necessity of a more extensive equipment, or larger outlay for station accommodations than was originally contemplated.

Our work is now in a state of rapid progress. A large force is employed upon it, and materials of all kinds for the superstructure are in readiness.

Sixty miles from Lasalle to Bloomington, and fifty-five miles from Chicago to the Kankakee River, are in operation. Parties are now laying track at four or five different points on the line.

We have received more than 40,000 tons of Iron since the commencement of the work, all of which has gone to Illinois or is on its way there The remainder due us on our contracts, amounting, with what is already received, to 67,000 tnns, we have good reason to believe will arrive as fast as it shall be needed.

It is assumed that the road will cost completed.....	$17,000,000,00
The means are already secured, as appears by the foregoing statement, to the amount of.	15,771,981 71
Leaving yet to be provided.....	$1,228,018 29

We are at liberty to issue, by the terms of our mortgage, in the whole, $17,000,000 of Construction Bonds. There are consequently more than $2,300,000 of these Bonds not yet disposed of or appropriated.

We have more than 250,000 acres of land in the vicinity of the road, unincumbered by the mortgage, and subject to early sale if thought advisable, the avails of which are unappropriated exclusive of an equal number of acres appropriated to the interest fund.

And, in addition to all this, we shall have 150,000 shares of stock on which will have been paid only $5 per share, 10,000 shares on which has been paid $10 per share, and 10,000 shares on which has been paid $20 per share, all subject to call for further instalments, in case any possible contingency should render such a resort necessary, though the existence of such contingency can hardly seem possible.

New Discoveries of Iron Ore.

Messrs. Lansing & Thurber have at their office, adjoining the Post Office, some fine specimens of Iron taken from a mine recently discovered in the Lake Superior country, *within two miles of the Lake.* They also have some specimens of wrought Iron made from this Ore which is of a quality equal to the best that has been made from any of the ore in that region. It has been submitted to such tests as no other iron except when heated to a "welding heat" has ever successfully endured. While cold it has been twisted and bent in every possible manner, with as much apparent ease and without showing any more indications of cracking or breaking than tne purest lead. If this mine shall be found to be inexhaustible, as seems to be the case, being ten or eleven miles nearer to the Lake than the iron mountain beds of ore, it will prove a most invaluable discovery, as it can be brought to this city at so small a comparative cost. In addition to the Iron Ore, it is believed that an abundant supply of Red Ochre exists in the same mines. Specimens of the ore have been submitted to the inspection of Dr. Terry, who is of opinion that the substance exists there of an excellent quality, as we are informed. We also learn that a company is about being formed, partly of Eastern and partly of Detroit capitalists, for the purpose of working this Iron into blooms, &c.

We trust that such is the case, and that Michigan in general and Detroit in particular will begin to reap some of the benefits of the rich and inexhaustible mineral resources of the Lake Superior Iron mines.—*Detroit Tribune.*

Cost of Locomotive Manufacturing.

There are two things which especially interest western manufacturers of iron, in regard to the expediency of organizing locomotive works in their section of the country; one is the cost of manufacturing an engine at home, another the cost of moving an engine from the east, the demand for either being supposed to be dependent on a certain price. We will give an estimate of the whole business of making locomotives as far as we can do in a general case.

To commence with the locomotive shop, we will say a desirable plan will be found described in the last number of the Journal,—desirable for its convenience for conducting the different departments, with the means of a ready communication between the whole. By that plan a convenient delivery of one part of the work to the hands of the department of the next is easily had. The shop can be cheaply built, and those operations requiring *fire* are conducted entirely by themselves. A good light can be readily had and a good distribution of shafting can also be made. The plan admits of any future extensions in any department without interfering with the others—The business too would be conducted wholly upon one level, avoiding the loss of room and labor occasioned by stairs.

To contain the following list of machinery, sufficient for the manufacture of three engines per month, a main shop building of 160 by 65 feet would be required; a wheel shop and wood shop in one range of 40 by 100 ft, a boiler shop 50 by 190 feet, and a blacksmiths' shop 60 by 40 feet. The following estimate embraces a full list of tools necessary, and their whole cost under present prices of machinist's labor and of materials.

LIST OF TOOLS FOR BUILDING THREE ENGINES PER MONTH.

Three lathes,	18	feet	long;	swing	6½	ft.		$6300
One boring "	12	"	"	"	4	"		1000
Six lathes	12	"	"	"	2	ft.	8 in.	2250
Two "	12	"	"	"	2	"	2	725
Two "	16	"	"	"	2	"	8 "	920
Eight "	10	"	"	"	2	"		2600
Four "	8	"	"	"	1	"	7 "	1100
Five "	6	"	"	"				900
One Planer	16 feet long.....							1150
Two Planers	10 " "							1350
Five Planers	6 " "							2250
Three polishing lathes.....								345
Two upright drills.....								700
Eight upright drills.....								760
Two bolt cutting machines.....								340
One Key way cutter for axles.....								175
One 42 inch blower.....								80
Sixty vises.....								690
Ten anvils.....								115
Power saws and frames.....								150
One power punch shears.....								600
One travelling hoisting apparatus.....								250
One trip hammer.....								300
Three cranes.....								200
Taps, Dies, Chucks, Drills, &c								500
Total for tools.....								$25750
One steam engine, 14 inch cylinder, 42 in. stroke, with two flue boilers, 42 inches in diameter, and 32 feet long.....								$3200
4000 lbs. of shafting at 11 cents.....								440
15000 lbs. or 800 feet of cast iron pipe 5½ c.								828
								$4468
Grand total for machinery.....								$30,218

The above estimate includes no allowance for a foundry, which would require two cupolas and two

or three cranes, with flasks, ladles, etc., costing perhaps $1500 more.

The shops and lands will cost from $10,000 to $12,000. The working capital should be a *command* of $100,000, and should be made up of *good orders, and good credit*, with $10,000 cash, and a good stock, say enough for one months operations, of castings, copper, bar iron, etc.

The next thing is the cost and the profit of making locomotives. For this purpose we shall assume the case of a first class outside connected engine, built west of the Alleghanies, and allow as nearly as we can the prices paid for materials, and an advance of ten per cent. on the prices paid in Boston for labor. We will give our estimates upon a 15 inch cylinder engine, having four six-feet drivers with Bowling tires, and four truck wheels; 46 inch boiler, weighing, without tubes 6400 lbs. and containing 3200 lbs of solid brass tubes, equal to 775 square feet of tube surface; solid forged frame, link motion and full stroke pumps. Tender to carry 1½ cords of wood and 1600 gallons of water.

IRON CASTING.

Two 15 in. cylinders cast in loam	2500 lbs *a* 4 cts.	$100,00
Two 15 " pistons all iron castings for do	325 "	
Four 15 " cylinder covers	550 "	
Two steam chests and covers	800 "	
Two cross heads	200 "	
Four driving wheels	6800 "	
Twelve truck wheels	5600 "	
Other engine castings	4500 "	
Other tender castings	1750 "	
	20,525 " *a* 3¼ cts.	$667,06
		$767,06

BRASS CASTINGS.

For pumps, valves, etc.	320 lbs	
For cocks	40 "	
For oil cups	20 "	
For letters and ornaments	300 "	
	680 " *a* 30	$204,00

Brass castings are 35 cts. per lb. in the Eastern markets.

Brass castings, Babbitt lined	75 lbs	
One set packing rings.	100 "	
Connecting rod boxes	100 "	
Truck and tender axle boxes	100 "	
Other boxes	100 "	
	375 " *a* 34 cts.	127,50
		$331,50

FORGING AND BAR IRON.

Frame in forged bars	2200 " *a* 6½	$143,00
Truck and tender axles	1600 " " 5½	88,00
Driving axles	1300 " " 6½	84 50
Forged braces, piston rods, slides and crank pins	800 " " 7½	60 00
Connecting rods	600 " " 8½	51 00
Four 6 feet tires	3200 " "11½	368 00
Driving and Truck springs	900 " "12½	112 50
Bar Iron not included above	6500 " " 4½	292 50
		$1199 50

BOILER AND TENDER TANK.

2800 lbs. common iron in shell *a* 6 cts.		$168 00
2500 " shapes, extra quality and size	" 6½ "	162 50
2500 " tank iron	"4½ "	112 50
3200 " solid brass tubes	"30 "	960 00
(Copper tubes will cost 39 cts. per pound.)		
Angle iron and rivits		50 00
		$1453 00

LABOR

Finishing cylinders and steam chests	$125 00
" Pistons, packing and rods	22 00
" Connecting rods	85 00
" Driving and truck wheels and axles	125 00
" Frame and jaws and setting up same	175 00
" Other running work	550 00
" Brass work not included above	45 00
Setting up engine	400 00
Setting 160 tubes	35 00
Making Boiler	330 00
Making tank	100 00
Setting up tender and making frame	100 00
Other wood work	60 00
Painting	60 00
Forgings	275 09
	$2487 00

MISCELLANEOUS.

Coppersmith s labor, including stock for pipes and sheet iron work; stock for lagging boiler and making sparker	350 00
One 5 inch steam whistle	18 00
One bell, 120 lbs. *a* 34 cents	40 80
480 lbs tender springs *a* 12½ cents	60 00
Making water hose	8 00
Lumber	40 00
Tools furnished	40 00
	$556 80

RECAPITULATION.

Iron Castings	$767 06
Brass Castings	331 50
Forgings and bar iron	1199 50
Boiler and tender tank	1453 00
Labor	2487 00
Miscellaneous	556 80
	$6794 86

Under a proper organization of labor, machines could be completed in Detroit, Chicago, St. Louis, Pittsburgh or Cincinnati, for $6,800 each, and which would command a ready sale at $8,500, leaving a net profit of $1,500, after deducting expenses of carrying on the business and of delivering the engine to the purchaser.

Thus we find that with a direct first outlay of $50,000, and a credit of from $90,000 to $100,000, the total value of the machines built will be $306,000, produced at a cost of $252,000, leaving a profit of $54,000.

The difference in the price of eastern machines does not arise so much from differences in the price of materials and labor, as from the different ways of building engines. The Boston style of engine has generally been built with a boiler of simple and cheap construction, cheaply built frames, cheap truck frames, and in some cases from materials imported at a low price. The Baltimore engines which are sold for $9,500, are very cheaply built, and command their extraordinary high price only by the protection of patent monopolies covering many parts of their construction. The Paterson engines combine the most thorough construction and effective proportions of any engines of our acquaintance, and it is upon an imitation of their successful workmanship and material that western shops will be able to compete with outside builders in the western market. The good quality of materials in the west, such as iron and copper, will reduce the amount of stock used in engines, and insure a better article when completed. We would not be afraid to use Lake Superior iron of ¼ inch thickness in the furnaces and shells of locomotive boilers, in place of common English iron of ⅜ inch thickness, and consequently of half as much more weight. The soundness of this and of the Missouri iron would prevent any necessity for using copper in the furnaces by which a large amount would also be saved yearly. It might also be found better adapted than any other iron for the manufacture of tires, and might therefore be successful in the place of the Lowmoor or Bowling tire.

The annual saving in fuel would be, for a shop of the capacity of three engines per month, $2,500, less at Pittsburgh and other towns accessible to coal, than in Boston.

It will be an object with western manufacturers to secure the services of experienced engineers and designers, for unless they succeed in producing a first class, acceptable style of work in the beginning, their efforts will be crushed, and railroad companies would patronize eastern shops. We dare say that unless they build *better* engines than are sent to many their roads from eastern shops, they will fail of success. They must take advantage of the excellence of their materials and of the best experience they can procure in any market.

The *whole success* of a western shop will depend upon its management. The business of building locomotives cannot be carried on with any success by men unacquainted with it.

The *protective tariff* which the western builder will enjoy, is the cost of delivery of Eastern built engines on Western roads. The materials necessary to build a locomotive could be shipped in a rough state at a cheaper rate than the finished engine. The delivery of engines built at the East is, and must continue to be, very much embarrassed by the break of gauges at Buffalo, Cleveland and other important shipping ports on the lakes, and also by the very necessity of lake carriage, as locomotives can only be carried on the decks of vessels at great risk and at a large expense for handling. The cost of shipping a locomotive, of $9000 value, from Boston to Detroit, when made over a disturbing gauge and vessels on Lake Erie, will be for the month of October, as follows:

Railroad truckage of Engine from Boston to Buffalo, 530 miles at 20 cts.	$106 00
Railroad freight of Tender, drivers &c., say 15 tons at $10,	150 00
Cartage of Engine through Troy,	24 00
Freight of trucks and ponies from Buffalo back to Boston,	25 00
Changing drivers at Buffalo,	6 00
Railroad dockage at Buffalo,	10 00
Putting Engine and tender on ship,	20 00
Forwarders commission,	25 00
Lake freight to Detroit,	135 00
Insurance $9000 at 2½ per cent	225 00
Two weeeks time and expenses of man to go with engine,	42 00
Use of trucks and ponies, (fitted at an expense of $250 per sett),	10 00
	$778 00

With an engine built for a gauge corresponding with the Western and the New York Central roads, the cost of delivery would be, in the spring or

fall, full $600. Under no circumstances, nor at any time, could it be less than $400. Any engine shipped to St. Louis would be for a 5 ft. 6 inch track, which is the gauge west of the Mississippi, and would require truckage over either or all of the 4 ft. 8½ inch, the 4 ft. 10 inch or the 6 feet gauges intervening, and could not be delivered for less than $1200, or 15 per cent. on its whole value.

Let western manufacturers consider these facts. They can compete successfully with eastern manufacturers in the quality and cheapness of materials. They possess the requisites of cheap land, cheap food and cheap fuel, and can deliver their engines directly from their shops into the tracks of their roads, an advantage not possessed by the Boston or the Paterson builders, who pay from 50 to 100 dollars for trucking each machine in the streets before it reaches any railroad track.

These advantages in comparison with eastern shops may be stated as follows. A Massachusetts shop turned out nineteen locomotives in a certain period, during which the consumption of coal at the shop reached $1900 in value which sum in Pittsburgh could not have exceeded $250. Every engine had ⅜ inch iron, worked into the boilers, which had it been of best iron, partly ¼ and partly 5-16 inch thick would have saved 1300 lbs of iron on each boiler, or over twelve tons of useless weight on the whole number of engines. Copper tube sheets costing $1425, or $1175 more than iron ones would cost, were put in from the want of confidence in the thick iron used. Of these machines twelve were trucked to neighboring depots or docks at an expense of $50 each, and seven were trucked to a greater distance at $100 each, or $1300 in all for truchage. Here, without regarding the loss from using poor, cheap and thick iron, we have the sum of $4125, or $217 per engine, clearly in favor of the western shop.

The labor upon eastern built locomotives, including forge and foundry work, does not exceed $3000 per engine, and to secure the best and most experienced hands the western builders can draw upon a sum of from $400 to $1200, otherwise charged to the delivery of eastern engines. It would be greatly for the interest of Missouri and of her railroads, and in the same manner of Michigan, if some of their great railroad companies would become silent partners to the extent of $50.000 each in large shops of this character, to be located on their lines. The capital and patronage of a lnrge railroad company would bring labor, wealth and independence to any community among whom it was thus bestowed, and would revert to their own benefit, in the benefits arising from the manufacture of engines, the saving on their own contracts, and the trade it would create over their own lines.

Belleville and Illinoistown Railroad.

The Belleville *Advocate* says, "we are much pleased to learn that the two locomotives designed for our road are built and shipped at Paterson N. J., for Illinoistown by the builders. The iron is expected daily. This is quite encouraging.—Meanwhile the work is steadily advancing to maturity. The unwholesomeness of the American Bottom has been a drawback on the work, and an expense to the county. We are glad to see the road proceeding as well as it does.

Journal of Railroad Law.

INSURANCE ON GOODS DELIVERED FOR CARRIAGE.

Common carriers being liable for goods which they have undertaken to carry have such an interest therein that they can procure policies for insurance upon them, in their own names. And this insurance interest of the carriers will continue notwithstanding the goods are transported by the carriers in vessels belonging to other persons, chartered by them for this purpose. In such a case the charterers of the vessel and not the owners are the proper parties to insure the cargo as common carriers.

DELIVERY OF GOODS FOR CARRIAGE BY LEAVING THEM ON DOCKS &c.

In order to charge a common carrier for goods delivered to him for carriage, it is of course necessary that there should be evidence of due delivery of the goods. But if a carrier agree that goods may be deposited for carriage in a particular place, and with any special notice thereof, such deposit without notice will be a sufficient delivery. And such an agreement may well be inferred if, it has been the constant practice and usage of parties to deposit goods, intended to be carried, upon the private dock of the carrier,—without any other notice than the marks affixed to the goods.

Merriam vs. Hartford and New Haven Railroad Co., 20 Con. 354.

WHAT IS IN A LEGAL SENSE AN ACT OF GOD?

If it be necessary for a common carrier to avail himself of transportation by water, and his boat be stranded upon a recently formed bar of whose existence he was before wholly ignorant,—he is liable for all damages. Such an incident is not what Law regards as an act of God,—which will exonerate the carrier from liability. An act of God is some direct and violent operation of physical causes, like a tornado, an earthquake, a flash of lightning, for example. 6 Grattan 189.

LIMITING A CARRIER'S LIABILITY BY MEANS OF A NOTICE AFFIXED TO TICKETS.

In the case of *Brown vs. the Eastern Railroad Company*, decided in the Massachusetts Supreme Court, last spring, Dewey J. observed.

The doctrine is gradually being incorporated into the jurisprudence of the times, that limitations of the liabilities of common carriers, for securing due notice to the traveller, or the parties for whom goods are to be transported, are to be held operative and binding upon the parties. It is so in England. Also in some of the States of this Union. Bingham vs. Rogers 6 Watts & Sag. 495; Laing vs. Calder 8 Barr 484. Swindler vs. Hillard, 2 Richardson S. C. 286.

Without questioning the right of common carriers to make *reasonable* limitations as to the extent of their liabilities for luggage or merchandize to be transmitted by them, and conceding the decisions to that effect to be sound, we are of opinion, nevertheless, that they furnish no ground for denying the plaintiff's right to maintain this action.

In the foregoing case it was accordingly held by the Supreme Court of Massachusetts that notice that a Railroad Corporation, " would not be liable for the luggage of passengers beyond a certain amount unless &c." printed on the *back* of *the* passage ticket, and detached from what ordinarily contains all that is material to the passenger to know, does not raise a legal presumption that the party at the time of receiving the ticket and before the train leaves the station, had knowledge of the limitations which the carrier had attached to the transportation of baggage.

It may be added that in the *Camden and Amboy Railroad* vs. *Bauldalt* it was held that a notice in English to a German ignorant of our language was held of no effect 4 *Harris* 67.

Also in *Butter vs Heane* 2 *Campbell* 415, where the limitation was printed in small type, the will generally being in larger type, the notice was held invalid.

In some English cases limitations on *the face of* tickets have been held to be sufficient. *Austin* vs. M. S. Railway Co., (11 English Laws and English R. 506. Shaw vs. York and North Midland Railway Company, 16 Railway cases 87.)

Knoxville Railroad.

The Survey of the line of this road from Knoxville to Danville has just been completed. Mr. Barker, the principal assistant engineer under Col. Pritchard, with his whole corps, reached this place on Monday last. The result of the survey shows that the country is eligible for a railroad and no serious obstacles in the way. The line surveyed passes through the counties of Knox, Anderson and Chapman in Tennessee, and Whitley, Laurel, Pulaski, Rockcastle, Lincoln and Boyle, in this state. We are informed by Mr. Barker that the line through these counties measure 162 miles, but by connecting and running more directly from the point in Whitley, that sixteen miles of the distance are saved, and the entire line reduced to 146 miles. The engineer expresses the confident opinion that a perfectly accurate survey for location will reduce the distance to 143 miles, with fair ground to construct a railroad over, in easy grades. The maximum grade on the line run in 52 feet. In passing the Cumberland mountain at Elk Gap, the grade on the Kentucky side is 50 feet, and on the south, or Tennessee side, it is 34 feet. The entire line is represented as a very favorable one as to grades, curves, and magnitude of work. The cost of construction, it is confidently believed by the engineers, will range between $20,000 and $25,000 per mile. So much of the line being side cutting, right of way granted, timber. gravel, for ballast, and other material obtainable without charge, the work can be constructed at a low figure.—*Danville Tribune.*

The company has been organized. An efficient board of directors has been elected, who have chosen Cyrenius Wall. Esq., President.

Alabama and Tennessee River Railroad.

We are gratified to learn that the energetic officers of this road, are shoving things along rapidly. The entire section of the road between Montevello and the Coosa river, is now under contract for the grading, and the work is being shoved on with great energy. The bridge over the Coosa will soon be completed. The grading beyond the river has been completed for some time past, to within the vicinity of Jacksonville. It is expected that contracts for laying the cross-ties and iron to Talladega, will soon be effected. Thus we see, as little as is said about it, that this great work is progressing finely. It is the earnest desire of all, to have the road in operation and the iron horse snorting in the town of Talladega, by the next 4th of July. Amen, say we.

Col. Philips, the President of the Company, and Col. Troost, the Chief Engineer, deserve great credit for the energy and determination they have evinced in sending the road forward. As soon as the road crosses the Coosa river, the business of the road will necessarily increase largely. The additional trade and business brought to Selma, will undoubtedly be largely beyond the expectations now made by many of

our business men.—All should entertain a lively interest for the progress and early completion of the road.—*State Sentinel.*

American Railroad Journal.

Saturday, August 27, 1853.

Covington and Lexington Railroad.

This work is making rapid and very satisfactory progress. The road is now opened about 28 miles from Covington, and regular freight and passenger trains have been put on for this distance. By the first of September the road will be completed some 20 miles further, to Falmouth the shire town of Pendleton county. At this point the center of a large trade will be reached. The grading of the road to this point is completed, and is nearly so to Cynthiana, 64 miles from Covington. The entire work of grading is so far completed that the whole line will be in readiness for the rails as fast as they can be laid. This is being done at the rate of one halfmile per day, and which will be continued, with good weather, till the road is completed. The cost of the work thus far is within the last estimates of the company.

New Orleans and Opelousas Railroad.

The $1,250,000 of the bonds of the New Orleans, Opelousas and Great Western railroad company, which have been advertised for sale by bids to be received up to 15th September next have been withdrawn from the market. The agents of the company having negotiated $500,000 of the bond sufficient for their present wants, with Messrs. Winslow, Lanier and Co.

The remainder will be held for the future action of the company.

Stock and Money Market.

There has been a marked improvement in the Stock Market since our last. Erie Railroad has advanced from 72½ to 75. Hudson River from 68 to 70. Reading from 82½ to 85. Other *fancies* not embraced in our last, also show a marked improvement. The Cumberland coal stock has advanced 4 per cent. Nicaraugua Transit, nearly as much. All kinds of stocks are boyant. Money is steadily becoming more abundant though the Banks continue to contract their loans. The new law in reference to Bank exhibits, will undoubtedly exert an excellent effect in securing a greater uniformity in their discounts and in confining them to a more ligitimate business. The following statement will show the comparatiee conditon of the Banks for the last two weeks.

	Augt. 13.	Augt. 20.	Decrease.
Loans	$94,663,283	94,074,717	558,565
Specie	10,653,518	11,082,274	* 428,756
Circulation	9,451,943	9,387,727	61,216
Deposits	57,451,504	57,307,223	144,720
Prop. Spec.	15 cts. 9 miles	16 cents 6 miles.	

* Increase.

Money is yet too tight to allow much demand for bonds. Orders that have to come out for a few weeks past could hardly be filled from the difficulty of selling bills. Exchange is now at a fraction under 109¼. The increasing ease in the money market will bring up the rates and at the same time render the means of our Bankers available. We see no reason why money should not become abundant in Sept. and October with a good demand for Railroad securities.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of $100.

NAME OF COMPANY.		Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence	Maine.	150	1,538,100	2,973,700	5,150,278	254,743	113,520	none	100
Androscoggin and Kennebec	"	55	809,378	1,016,500	2,064,458	140,561	80,053	none	36
Kennebec and Portland	"	72	876,741	800,000	2,180,000	133,338	.....	none	45
Port., Saco and Portsmouth	"	51	1,355,500	123,884	1,459,384	208,669	.....	6	100
York and Cumberland	"	20	285,747	341,100	713.605	23,946	11,256	none	40
Boston, Concord and Montreal	N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	35
Concord	"	35	1,485,000	none.	1,485,000	305,805	141,836	8	108
Cheshire	"	54	2,078,625	720,900	3,002,094	287,768	55,266	5	47
Northern	"	82	3,016,634	.....	.....	328,782	163,075	5	57
Manchester and Lawrence	"	24	717,543	.....	.....	.....	.....	6½	97
Nashua and Lowell	"	15	600,000	none.	651,214	132,545	51,513	8	109
Portsmouth and Concord	"	47	.....	.....	1,400,000	.....	.....	none	....
Sullivan	"	26	.....	.....	673,500	.....	.....	none	12
Connecticut and Passumpsic	Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	40
Rutland	"	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	30
Vermont Central	"	117	8,500,000	3,500,000	12,000,000	.....	.....	....	14¼
Vermont and Canada	"	47	1,500,000	.....	1,500,000	Leased to the Vt. Cent.			101
Western Vermont	"	51	392,000	700,000	.....	Recently	opened.	none	....
Vermont Valley	"	24	.....	.....	.....	.....	.....	none	....
Boston and Lowell	Mass.	28	1,830,000	.....	1,995,249	388,108	130,881	7½	98
Boston and Maine	"	83	4,076,974	150,000	4,092,927	659,001	338,215	7	105¼
Boston and Providence	"	53	3,160,390	390,000	3,546,214	469,656	227,434	6	87
Boston and Worcester	"	69	4,500,000	425,000	4,845,967	758,819	331,296	7	101
Cape Cod branch	"	28	421,295	171,800	633,906	60,743	30,056	2½	40
Connecticut River	"	52	1,591,100	193,500	1,801,946	229,004	72,028	5	55
Eastern	"	75	2,850,000	500,000	3,120,391	488,793	241,017	7½	92
Fall River	"	42	1,050,000	none.	1,050,000	229,445	99,589	8	104
Fitchburg	"	66	3,540,000	112,305	3,623,073	574,574	232,787	6	99
New Bedford and Taunton	"	20	500,000	none.	520,475	164,230	43,950	7½	117
Norfolk County	"	26	547,015	819,743	1,245,927	67,251	23,415	none	62
Old Colony	"	45	1,964,070	282,300	2,293,534	322,213	101,510	none	94
Taunton Branch	"	12	250,000	none.	307,136	137,406	24,399	8	....
Vermont and Massachusetts	"	77	2,140,536	1,001,500	3,203,333	218,679	18,648	none	16¼
Worcester and Nashua	"	45	1,134,000	171,210	1,321,945	162,109	66,900	4½	58½
Western	"	155	5,150,000	5,319,520	9,953,759	1,339,873	683,194	6½	99½
Stonington	R. I.	50	.....	.....	.....	.....	.....	....	57½
Providence and Worcester	"	40	1,457,500	300,000	1,781,498	253,690	139,514	6	....
Canal	Conn.	45	.....	.....	.....	.....	.....	10	....
Hartford and New Haven	"	62	3,000,000	472,000	.....	600,408	332,223	none	125
Housatonic	"	110	.....	.....	2,500,000	329,041	168,902	none	....
Hartford, Prov. and Fishkill	"	50	.....	.....	In progres	69,629	.....	none	....
New London, Wil. and Palmer	"	66	558,861	800,000	1,511,111	114,410	.....	....	....
New York and New Haven	"	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	104
Naugatuck	"	62	926,000	440,000	.....	.....	.....	....	....
New London and New Haven	"	55	750,500	650,000	1,380,610	Recently	opened.	none	45
Norwich and Worcester	"	54	2,121,110	701,600	2,596,488	267,561	116,965	4½	52¼
Buffalo and New York City	N. Y.	91	900,000	1,550,000	2,550,500	Recently	opened.	none	85
Buffalo, Corning and N. York	"	132	.....	.....	In progres	.....	.....	none	65
Buffalo and State Line	"	69	879,636	872,000	1,921,270	Recently	opened.	....	130
Canandaigua and Niagara F	"	50	.....	.....	In progres	.....	.....	....	....
Canandaigua and Elmira	"	47	425,509	582,400	987,627	76,760	39,360	none	68
Cayuga and Susquehanna	"	35	687,000	400,000	1,070,786	74,241	23,496	none	....
Erie, (New York and Erie)	"	464	9,612,995	24,003,865	31,301,806	3,537,766	1,691,623	7	72¼
Hudson River	"	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	69¼
Harlem	"	130	4,725,250	977,463	6,102,935	681,445	324,494	5	57½
Long Island	"	95	1,875,148	516,246	2,446,391	205,068	44,070	none	32¾
New York Central	"	504	22,858,600	2,111,824	.....	.....	.....	....	115
Ogdensburgh (Northern)	"	118	1,579,969	2,969,760	5,133,834	480,137	195,847	none	28
Oswego and Syracuse	"	35	350,000	201,500	607,803	90,616	43,609	4	70
Plattsburg and Montreal	"	23	174,042	131,000	349,775	Recently	opened.	none	....
Rensselaer and Saratoga	"	25	610,000	25,000	774,495	213,078	96,737	....	....
Rutland and Washington	"	60	850,000	400,000	1,250,000	Recently	opened.	....	....
Saratoga and Washington	"	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland	"	32	237,690	100,000	329,577	Recently	opened.	....	33
Troy and Boston	"	39	430,936	700,000	1,043,357	Recently	opened.	none	....
Watertown and Rome	"	96	1,011,940	650,000	1,693,711	225,152	116,706	8	109
Camden and Amboy	N. J.	65	1,500,000	.....	4,327,492	1,388,385	478,413	10	150
Morris and Essex	"	45	1,022,420	128,000	1,220,325	149,941	79,252	4	....
New Jersey	"	31	2,197,840	476,000	3,245,720	603,942	316,259	10	148
New Jersey Central	"	63	986,106	1,500,000	2,379,880	260,899	124,740	3½	....
Cumberland Valley	Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	....
Erie and North East	"	20	600,000	.....	750,000	Recently	opened.	....	125
Harrisburgh and Lancaster	"	36	783,950	688,051	1,609,494	200,249	106,932	8	....
Philadelphia and Reading	"	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	88
Philad., Wilmington and Balt.	"	98	3,850,000	2,403,276	6,813,839	667,785	383,501	5	79¼

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of $100.

NAME OF COMPANY.		Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central	Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	98
Philadelphia and Trenton	"	30	.....	.....	.....	.....	.....	....	....
Pennsylvania Coal Co	"	47	.....	.....	.....	.....	.....	....	....
Baltimore and Ohio	Md.	381	9,188,300	9,827,123	19,542,307	1,325,563	615,384	7	62½
Washington branch	"	38	1,650,000	.....	1,650,000	348,622	216,237	8	....
Baltimore and Susquehanna	"	57	.....	.....	.....	413,673	152,536	....	..
Alexandria and Orange	Va.	65	.....	.....	In prog.	.....	.....	....	....
Manassas Gap	"	27	.....	.....	In prog.	.....	.....	....	....
Petersburgh	"	64	.....	.....	.....	.....	.....	....	....
Richmond and Danville	"	73	1,372,324	200,000	In prog.	.....	.....	....	....
Richmond and Petersburgh	"	22	685,000	.....	1,100,000	122,861	74,113	none	....
Rich., Fred. and Potomac	"	76	1,000,000	503,006	1,531,238	254,376	113,256	7	105
South Side	"	62	1,328,722	800,000	In prog.	.....	.....	....	....
Virginia Central	"	107	1,400,100	446,036	In prog.	176,485	74,902	none	....
Virginia and Tennessee	"	60	3,000,000	1,500,000	In prog.	.....	.....	none	....
Winchester and Potomac	"	32	180,000	120,000	416,532	89,776	.....	12	....
Wilmington and Raleigh	N .C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	....
Charlotte and South Carolina	S. C.	110	.....	.....	.....	.....	.....	....	....
Greenville and Columbia	"	140	1,004,231	300,000	In prog.	.....	.....	....	....
South Carolina	"	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester	"	....	.....	.....	In prog.	.....	.....	....	....
Georgia Central	Ga.	191	3,100,000	306,187	3,378,132	945,508	508,625	8	122
Georgia	"	211	4,000,000	1,214	.....	934,424	456,468	7½	....
Macon and Western	"	101	1,214,283	168,000	1,596,283	296,584	153,697	9	109
Muscogee	"	71	.....	.....	In prog.	.....	.....	....	....
South Western	"	50	586,887	150,000	743,525	129,395	71,535	8	....
Alabama and Tennessee River	Ala.	55	.....	.....	In prog.	.....	.....	....	....
Memphis and Charleston	"	93	776,259	400,000	In prog.	.....	.....	....	....
Mobile and Ohio	"	33	879,868	.....	In prog.	.....	.....	....	....
Montgomery and West Point	"	88	688,611	.....	1,330,960	173,542	76,079	8	....
Southern	Miss.	60	.....	.....	.....	.....	.....	....	....
East Tennessee and Georgia	Tenn.	80	835,000	541,000	In prog.	.....	.....	....	....
Nashville and Chattanooga	"	125	2,093,814	850,000	In prog.	.....	.....	....	....
Covington and Lexington	Ky.	....	1,430,150	1,100,000	In prog.	.....	.....	....	....
Frankfort and Lexington	"	29	357,218	.....	584,902	87,421	44,250	....	80
Louisville and Frankfort	"	65	.....	.....	.....	.....	.....	....	....
Maysville and Lexington	"	....	.....	.....	In prog.	.....	.....	....	....
Cleveland and Pittsburgh	Ohio.	100	1,239,450	1,371,000	2,963,756	194,429	123,306	6	96
Cleveland, Painesv. and Ash.	"	71	.....	.....	.....	.....	.....	....	....
Cleveland and Columbus	"	135	3,027,000	408,200	3,655,000	777,793	483,454	12	132
Columbus, Piqua and Indiana	"	46	.....	.....	2,000,000	.....	.....	....	98
Columbus and Lake Erie	"	61	.....	.....	.....	.....	.....	....	....
Cincinnati, Ham. and Dayton	"	60	1,694,000	906,000	2,600,000	321,793	200,967	....	115
Cincinnati and Marietta	"	....	.....	.....	In prog.	.....	.....	....	72½
Dayton and Western	"	40	310,000	550,000	925,000	Recently	opened.	....	80
Dayton and Michigan	"	20	.....	.....	In prog.	.....	.....	....	....
Eaton and Hamilton	"	36	.....	.....	.....	.....	.....	....	70
Greenville and Miami	"	31	.....	.....	.....	.....	.....	....	....
Hillsboro	"	37	.....	.....	In prog.	.....	.....	....	....
Little Miami	"	84	2,370,784	.....	2,634,157	526,746	314,670	10	119½
Mansfield and Sandusky	"	....	900,000	1,000,000	1,855,000	.....	.....	....	....
Mad River and Lake Erie	"	167	2,387,200	1,767,000	4,110,148	540,518	113,401	....	95
Ohio Central	"	57	.....	.....	In prog.	.....	.....	....	....
Ohio and Mississippi	"	....	.....	.....	"	.....	.....	....	97
Ohio and Pennsylvania	"	187	1,750,700	2,450,000	.....	Recently	opened.	....	....
Ohio and Indiana	"	....	.....	.....	In prog.	.....	.....	....	....
Scioto and Hocking Valley	"	....	.....	.....	"	.....	.....	....	....
Toledo, Norwalk and Clevel'd	"	87	552,000	800,000	1,317,140	Recently	opened.	....	150
Xenia and Columbus	"	54	1,092,137	119,500	1,257,714	237,506	135,363	15	....
Evansville and Illinois	Ind.	31	.....	.....	In prog.	.....	.....	....	....
Indiana Central	"	....	.....	.....	"	.....	.....	....	....
Indiana Northern	"	131	.....	.....	"	Recently	opened.	....	....
Indianapolis and Bellefontaine	"	83	.....	.....	"	.....	.....	....	103
Lawrenceburg and Ind	"	....	.....	.....	In prog.	.....	.....	....	75
Lafayette and Indianapolis	"	62	.....	.....	.....	Recently	opened.	....	78
Madison and Indianapolis	"	88	1,650,000	750,000	2,400,000	516,414	268,075	10	85
Peru and Indianapolis	"	40	.....	.....	In prog.	.....	.....	....	70
Terre Haute and Indianapolis	"	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago	"	....	.....	.....	.....	.....	.....	....	....
Chicago and Mississippi	"	....	.....	.....	.....	.....	.....	....	....
Illinois Central	Ill.	....	.....	.....	.....	.....	.....	....	136
Galena and Chicago	"	92	1,932,361	500,000	In prog.	473,548	286,152	....	124
Michigan Southern	Mich.	315	2,499,410	2,629,000	6,430,246	592,187	293,046	....	128
Michigan Central	"	282	4,000,000	4,067,396	8,614,193	.....	.....	8	108½
Pacific	Mo.	....	.....	.....	.....	.....	.....	....	....

New Safety Brake.

We have heretofore expressed our opinion that under the present aspect of railway travelling, nothing like security can be expected, and that until a public feeling is aroused which shall force railroad owners and railroad directors into providing double tracks, signals and telegraphs, we must urge the best preventive against the *results* of collisions. If trains are to be run towards each other, upon a single track, until they are about to meet, the means should be had for stopping them instantly, as we believe the passengers would suffer less in the shock from the momentum of their own bodies than from the momentum of the trains.

It is in this view that safety brakes, safety buffers and similar preventives are desirable, and should be patronized by as high authorities as railroad superintendents, car builders, repairers, and inspectors. More effectual means, those which will remove the *source* of accidents, can only be adopted by those higher in authority.

We are led to these observations by an examination of a model of an invention, the property of J. G. Gilbert, 216 Pearl street, in this city, which we believe will be found to afford security from the results of collisions, run offs, etc.

Its ready application to the common form of passenger cars, its simplicity and cheapness, together with the confidence which its owners possess in regard to its efficiency and success, induce us to recommend it to superintendents and car builders as being well worthy of a fair and conclusive trial. It involves a principle which has been but seldom applied for arresting the motion of trains, and which but one trial would demonstrate to be valuable or otherwise.

Mississippi and Missouri Railroad.

We learn from the correspondence of the Davenport Bee, that Mr. Farnham Chief Engineer on the Mississippi and Missouri Railroad has made a contract with responsible parties to build the first division of this road from Davenport, to Iowa City. The entire amount of stock required was not raised on the route but substantial parties in Davenport have pledged it rather than have the work delayed. This great work is fairly under way. Every thing is now in such shape that the parties who have built more railroads within the last two years than any other company of men can say that it shall go through immediately. In *one year* the iron horse *will* run to Iowa City.

Coke.

We have been shown, says the Chicago Journal, a specimen of Coke, manufactured from Illinois coal, by Mr. James Watson, at Morris, which, to all appearances, and as far as its qualities have been tested, is equal to any in use in the country, —either the product of the mines and labor of this country, or the imported article.

Mr. Watson is an experienced gentleman in the business of converting coal into coke, as the samples he furnishes will bear ample testimony, and we trust that sufficient encouragement will be given him upon a fair trial, to introduce the material extensively, as an article of fuel for general use in the "Prairie Land."

Illinois, as it is well known, is one vast bituminous coal bed, and although the raw material is of excellent quality, it only needs a little *rectifying* to bring it still more generally into use—particularly in furnaces, and as food for the Iron Horse, as the animal darts across our prairies.

St. Louis and Iron Mountain Railroad.

The Board of Directors of this company recently appointed a committee to solicit a subscription from the city of St. Louis, which, if obtained to the extent of five thousand shares, will, it is expected, put the road under contract, and insure its completion at an early day.

The claims of this road upon the support of the people of St. Louis have been ably stated in a memorial from the soliciting committee to the city council. It will bring St. Louis in connection with the rich mineral regions of Washington, St. Francis and Madison counties, each of which boasts of deposits of iron unrivalled for richness and extent. The quality of the Missouri iron ore is probably unequalled except by the Lake Superior iron ore, while the two are the best known for purity, fineness, and for the cohesion and ductility of their manufactured products. For rails, boilers and steam engines, and for all the useful applications of iron, and for conversion into steel, these ores possess singular merits. Of the extent of the Iron Mountain and neighboring deposits we may judge from the estimate of some of the engineers charged with the surveys of the Iron Mountain railroad, by which it appears that there is sufficient ore in the Iron Mountain, above the level of its base, for the manufacture of one hundred and five millions of tons of iron, while the Pilot Knob, Shephard's Mountain, and the adjacent banks will probably furnish a greater quantity. This shows a supply of iron sufficient for the wants of the entire world for centuries, and lying within a space of seven miles, and within eighty miles of St. Louis. Fuel for the prosecution of the iron manufacture at St. Louis will soon be supplied in abundance by the railroads communicating with the Illinois Bluffs, and in a short time cannel coal from the Osage will be supplied by the Pacific railroad.

The demand for rails for railroad construction in the western States would employ a large number of rolling mills for many years. In Missouri alone 1000 miles of road are now building and proposed for construction, which will require 100,000 tons of rails.

St. Louis, in short, has the *demand* and the *supply* for the manufacture of railroad and other descriptions of iron. The capital necessary for its prosecution may be readily furnished by mutual subscription; fuel, labor, food and the other requisites are ready at hand for application, and we have no doubt that in a short time the business will be successfully prosecuted in St. Louis under an efficient organization, to such an extent that that city shall become a powerful competitor with Pittsburgh and Cincinnati, both in local and in distant markets.

Manufactures of machinery will also commence in St. Louis, for the equipment of roads, the permanent structures of which shall also be furnished from the products of Missouri materials and Missouri labor. Manufactures of machinery should follow the manufacture of the material, and from the greater value imparted by *labor* to the machine than to the ore, to the engine than to the rail, will more powerfully contribute to enrich the place where they are prosecuted. The employment of a high grade of mechanical labor enlarges the area of trade, increases the demand for works of utility and of taste, promotes instruction, and more directly advances the social position of the seat of its operations. The prosecution of extensive manufactures of engines and cars at St. Louis will of itself afford direct support to a community of five thousand souls; and when it is recollected that the construction of engines requires the best qualities of materials, and that the cost of carrying engines from Boston to St. Louis is one thousand dollars each, we can easily distinguish the great advantages possessed by the last named city for their manufacture.

We are sure that if the people of St. Louis intend to benefit their city,—to make it a great source of supply,—and to thereby reap the value of the consequent attraction of capital, skill, trade and intelligence, they will devote themselves to the development of the great resources of their State, and by no better means can they start in this purpose than by placing themselves in direct connection, by the St. Louis and Iron Mountain Railroad, with the richest and most extensive deposits of the great useful mineral of the world.—We believe that the production and conversion of iron, and its exportation to the markets dependent upon external supply, will soon form a staple element in the business of St. Louis.

New way of Checking Railroad Baggage.

We learn that the following method of checking baggage, has recently been adopted with great satisfaction on two or three of the English railways:

When a train, say a down train, arrives at any particular station, a porter attends with a book. It contains tickets of stiff card board bound in the book. Each ticket is about three inches long and one inch wide. It is partly cut. So that two separate parts of it can be easily torn off. The tickets are numbered differently, but each of the three parts of a ticket has the same number. The outer part of the ticket has a loop of tape gummed to it. Suppose a person arrives at a station and is not going on by a train for an hour or two, or a day, and is desirous of leaving a carpet bag or a trunk at the station. He pays one penny, and in a moment the taped portion of a platform ticket is fastened to the handle of the carpet bag. This portion bears as has been already stated, a printed number also; the words "deposited at Winchester," or whatever the station might be, and likewise the words "for down train." Another portion of the ticket, with the same number as the last is torn off, and given to the owner of the carpet bag, to be presented at the station when the article is wanted. The words "for down train" are omitted on this portion. The portion of the ticket that is left in the book corresponds with that given to the passenger, and is a check on the money taker. The company then become responsible for the safety of the property. Luggage is divided into three classes—that for down train, up train and to be left till called for, and should be sorted into three different compartments at the station.—For each division there is a separate book of tickets. If a person were to find or steal a ticket, and apply for property, he would be instantly detected, because he would first have to say whether the luggage was for up or down train, or to be left till called for which he could not do unless he owned it.—There is no necessity for any address to be on the luggage. One penny per package per diem is charged for a platform ticket.

Great Western Railway.

The International Journal gives an account of the workshops of this company at Hamilton, and says the machine shops are erected, and depots and ware houses are being built, of a size calculated to astonish even those who had made the largest calculations as to Western progress. Besides the extensive buildings already up, there is now a machine shop and engine house in course of erection 145 by 156 feet, which will hold twelve locomotives besides the machinery necessary for repairing. Another building 450 by 84 feet is also going up.

The workshops are leased by Messrs. Brainard, Williams, Fisher & Co.

This is not only the largest workshop of the kind, but perhaps, the most extensive manufacturing establishment of any description in Western Canada. We cannot state precisely the number of hands employed, but some idea of the extent of the work may be arrived at, when we say that the daily consumption of iron is equal to three tons wrought, and about four tons of casting, and that the entire expenditure for materials and wages amounts to *one thousand dollars a day*. The number of men employed however, would convey but a very imperfect idea of the quantity of work produced, as the workshop exhibits the most efficient specimens of labor saving machines that we have ever witnessed. In fact the whole railroad car, ready for the painter and upholsterer, is entirely finished by machinery.

The whole machinery of the establishment, including forge-blasts, trip-hammers, drilling and cutting apparatus, turning lathes, saws, planes, etc., etc., is moved by a steam engine of some 40 horse power.

The number of cars of the various kinds which have already been put together, is about two hundred; and of these only 18 are passenger cars. These are each fifty feet in length, by about ten feet wide, and seven and a half feet high inside—and will be seated so as to accommodate 76 passengers comfortably. The inside is veneered with mahogany; and the drapery, cushioning, trimmings etc., are as gorgeous as could well be imagined; and from present appearances we may expect that the accommodation on the Great Western will be at least equal to any railroad accommodation in America. The workshops are the property of the railroad company, and are extensive and substantial stone buildings of superior workmanship, covered with slate, and must have been put up at a cost of several thousands of pounds. They are leased to Messrs. Brainard, Williams, Fisher & Co., we believe only for the period necessary to complete their present contract of 500 cars. The whole work, in all its branches is under the management of Mr. Foster, a gentleman who has had many years experience in conducting such works; and who from the order and regularity visible in the establishment, and the tasteful and substantial quality of the workmanship is, evidently, master of his profession.

A straight wharf or quay, extending fully half a mile eastward from the car factory and running parallel with the railroad, has been constructed in the bay, in an average of fourteen feet of water; and will afford every advantage of harborage and shipping to an extent not likely to be required by the present generation. In rear of this breast

work many acres of water are being filled up and converted into *terra firma*, upon which depots, store-houses, etc., are to be erected immediately; so that, in a few months, a large space of what was Burlington Bay, will have become the arena of busy, bustling mercantile and commercial life.

Conductor's Watches.

The most of the recent severe railroad accidents have disclosed the fact that *watches* are relied upon as primary means of safety. We know that a knowledge of time is especially *convenient* to the travelling public, and to railroad managers, inasmuch as it is the means of a mutual understanding between the carrier and the carried, by which the movements of the one can be ascertained, within reasonable limits, by the other. As standards for promptness on the part of both the trains and the passengers watches are *convenient* merely, but they should not in any respect be *essential* to safety. A train should set out only upon a road protected at every point, and should be as carefully signalled throughout its progress as if it were to be expected that draw-bridges, land slips, extra trains, cattle and other obstacles were awaiting the train upon every mile of the line. The impropriety, and really the criminal negligence, of entrusting a train of passengers to the necessarily imperfect structure and operations of a watch, is evident. It is only by an *assurance* that the track is clear, and not by a *confidence*, too often fatally misplaced, that railroad travelling may be made safe. Accidents from improper management are far more frequent than those from defective machinery, while the management of a road may be easier perfected than the materials used in its structure, and in that of its equipments. The qualities of a bar of iron or a wheel are hidden, and can be developed only by experiment: the progress of a train may be protected by an exercise of caution based upon exact and simple rules.

The idea that the correctness of a watch is essential to safety, should be abandoned. Its liability to derangement, resulting in irregularity or stoppage, makes it the most treacherous means of protection relied upon.

Consumption of Wood and Water in Locomotives.

C. C. Dennis, Esq., Superintendent of the Buffalo and State Line railroad, has furnished us with the following results of experiments made upon an engine running upon that road.

The "Equinox" left State Line with the Night Express at 2 A. M., July 14th, 1853, with a train of three eight-wheel cars.

At the time of starting, 1660 gallons of water were in the tender, and two gauges of water in the boiler; 180 feet of wood were upon the tender, and the fire box was partly filled. The trip of 69 miles was made in 3 hours, without taking wood or water. On reaching Buffalo, 508 gallons of water and 82 feet of wood remained in the tender, showing a consumption by evaporation and leakage of 1152 gallons of water, equal to 16 5-7 gallons per mile; and 98 feet of wood, equal to 1 42-100 cubic feet per mile.

The "Equinox" was built by Rogers, Ketchum & Grosvenor, of Paterson, N, J., and has 14½ in. cylinder, 22 inch stroke, and 6 feet drivers. The boiler contains 148 1¼ in. tubes, 11 feet long. The pressure of steam during the above named trip did not exceed 70 lbs. This engine has an independent graduated variable cut-off, which cuts off the steam, generally, in running over the Buffalo and State Line road, at eight inches of a stroke of 22 inches. The Buffalo and State Line railroad has grades of 36 feet per mile.

Railroad Meetings in Arkansas.

We learn from the Little Rock True Democrat that large meetings of the citizens of several counties have been held, to arouse an interest in the construction of the Cairo and Fulton Railroad.

A mass meeting of the citizens of Rockport, July, 27th. Robert Stribling, Jr., in the chair, and D. A. Parker, Secretary, resolved that Hot Spring County ought to subscribe its share of the improvement fund in aid of the construction of the Cairo and Fulton road, and directed that their internal improvement commissioner should submit the same to their next County Court. It was deemed important also that the Governor should convene an extra session of the Legislature to dispose of the Cairo and Fulton grant of Lands.

A meeting at Dover on the 25th of July, W. A. Barker in the chair, and Robert Cunningham Secretary expressed, themselves in favor of the construction of the same road, and resolved that second in interest to the people of Arkansas is the construction of a branch, tapping the main road near Little Rock, and running on the north side of Arkansas river to Fort Smith. The internal improvement commissioner was also requested to petition the County Court for permission to subscribe $20,000 in the Stock of Cairo and Fulton road conditioned upon its application to the construction of the Little Rock and Fort Smith branch.

A meeting of the citizens of Dallas County, at Princeton, July 25th, Dr. Wm. F. Smith, Chairman, and Joseph Gray, Esq. Secretary, also declared their full confidence in the success of the great road and promised their private subscriptions to their full ability, and requested the County Court to direct the disposal of the entire internal improvement fund of Dallas County in the Cairo and Fulton Railroad and its branches. An extra session of the Legislature was also strongly recommended.

York and Cumberland Railroad.

A correspondent of the Portland Argus says :—"We are happy to notice, as we do from the annual report of the President, Col. C. Q. Clapp, that this railroad, after suffering many reverses from 1849 to 1851, is now about to become *as good paying stock as any railroad of its cost in Maine*; and we think that the citizens of Cumberland and York Counties will find it for their advantage, no less than the advantage of business men in both counties, to subscribe to its stock and encourage its completion. For five months, the road has been extended and travelled to Saco river, and now has abundance of freight from that section.

The cost of construction thus far has not exceeded the estimates, and we look forward to its completion at an early day with pride and pleasure. It is gratifying to learn, that out of upwards of 6000 shares originally issued at fifty dollars per share, only 300 or thereabouts were sold by the company under its charter for delinquency of subscribers. These delinquencies occurred before the road had acquired the character for permanency and success that it now has. No stock, we are informed, will be sold hereafter for non-payment of assessments, as no subscriber now manifests any reluctance in paying his assessments promptly, seeing that the road is now in a prosperous condition, under the direction of its active, straightforward and vigilant President.

At present, the York & Cumberland, and Kennebec depots are each erected on land made from the flats at Back Cove, under the orders of Col. Clapp; and some $8,000 or $9,000 is to be also appropriated to filling up the flats, and making additional land to accommodate the increasing business of this road."

A Gigantic Steamer.

Some time since we published a statement that an English company were building a steamer of 10,000 tons, at Glasgow, intended to ply between England and the United States. The "State of Maine" newspaper gives the following as her dimensions:

	Feet.
Length	673
Breadth	80
Out to out of wheel houses	120
Depth of hold from combings of main deck	60
Power of engines	6000

Her deck presents an area of over 1½ acres of surface.

This ship is being built by Scott Russell, Esq., the greatest naval architect of England, and is constructed in separate compartments, made water tight, so that in case of her bow or her stern breaking off, she would still be able to float in separate pieces.

It is also stated that Messrs. Peto and Betts, two of the contractors for the European and North American railway, are members of the "Eastern Steam Navigation Company," who are building this steamer, and that she will probably connect with the great railroad route at Halifax.

The above named also has the following speculations:

"All experience has tended to show that speed and steadiness have been attained in proportion to the increase of the size of a ship. The better opinion now is that 30 feet is the extreme depth of the highest ocean wave, and that a vessel drawing 32 feet of water, of a length of 600 feet or over, can ride the waves without being removed from a level. We have this opinion enforced upon our attention by several of the captains in the *Cunard* and the *Collins* lines.

Grand Trunk Railway of Canada

A gentleman connected with *Herapaths Railway Journal* has received a letter from Mr. Roney, the manager of the above railway, so well known and esteemed in the United Kingdom in connection with the English and Irish railways, and the Irish Exhibition. Speaking of America, he says :—

"I am greatly pleased and astonished with this county and her resources. We have no idea of their magnitude in England. Every man, from the highest to the lowest, is prosperous. None more so than my own humble countrymen (Mr. Roney is Irish ;) and seeing what I do, my astonishment now is, not that so many have emigrated from Ireland, but that the whole of its peasant population had not quitted its shores forever.

"Our Grand Trunk Railway and the branches that will flow into it, are going to have a wonderful effect in developing the powers of the country. The first section of the line opens through from Portland to Montreal, a distance of 292 miles, on the 18th instant" (July).

Balancing Locomotive Drivers.

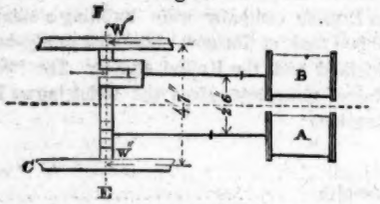
FROM D. K. CLARK'S RAILWAY MACHINERY.

[Continued from page 539.]

In the goods engine of the Caledonian railway, with cylinders 17×24 inches, and 6 four and a half feet coupled wheels, with the hind wheels behind the fire box, and arranged otherwise like Derosne and Cail's engine, the disturbing masses are even greater than in this, and amount in some of the engines to 10¼ cwt. for each cylinder. These engines are already partially balanced by counterweights amounting to 5½ cwt. on each side of the engine, and equivalent to about 6½ cwt. at the crank pin; but they are very unsteady laterally, and it would be difficult to place them in complete equilibrium.

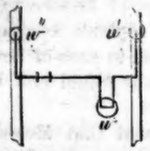
Inside Cylinder Single Engines.—Let A B, fig.

Fig. 15.



15, be the cylinders, C D, the wheels, and E F, the center line of the axle; if w be the disturbing weight for one cylinder, B, referred to the crank pin, it must be opposed by two weights, w' w'', in the wheels D C, as shown in fig 16, on the same

Fig. 16.



side of the axle, and together equal to the weight w. Then $w=w'+w''$; and making H and h the distances apart of the cylinders and the wheels, as before, we have

$$\tfrac{1}{2}(h-\mathrm{H})w'=\tfrac{1}{2}(h+\mathrm{H})w''$$

whence, reasoning as before,

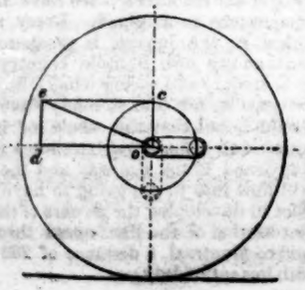
$$w'=\frac{h+\mathrm{H}}{2h}w, \text{ and } w''=\frac{h-\mathrm{H}}{2h}w;$$

that is, as before, the near weight w', is equal to the disturbing weight w; multiplied by the sum of the widths of the cylinders and wheels, and divided by twice the width of the wheels; and the off weight w'', is equal to w multiplied by the difference of the widths, and divided by twice the width of wheels.

Also, as before, the balance-weights, w' w'', on the near and off wheels, are to each other as the sum and the difference of widths of the cylinders and the wheels.

Finding, in the same way, the balance weights for the other cylinder, we have in each wheel two weights equal to w' and w'' of which the greater is opposed to the near crank, and the less is at right angles to it, and *opposed* to the off crank, or just the reverse of the position for outside cylinders, as in fig. 17, showing the weights for the right hand wheel.

Fig. 17.



Inside Cylinders.—Diagram to find the counterweight in the wheel.

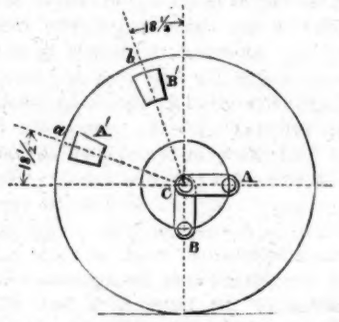
Here o d, o c, represent the elementary weights for the right hand crank; and the diagonal o e, the magnitude and direction of the resulting counterweight *diverging from* the off crank.

For example, let the total weight of the disturbing masses referred to the crank pin, be assumed at 540 lbs., the same as in the outside cylinder single engine already analyzed; the weights at each wheel are 407 lbs. and 133 lbs., and their resultant is 428 lbs. at an angle of 18½ with the center line of the near crank.

The equivalent counterweight may be found arithmetically by extracting the square root of the sum of the squares of the elementary ones: thus the square root of the sum of the squares of 407+133=428 lbs. Its direction also is found by setting off the line o e, at the inclination indicated by the ratio of the two weights: thus 407÷133=3; and the counterweight is placed in a direction diverging from the center line of the near crank, at the rate of 1 in 3.

To show the relative positions of the counterweights in one view, let A, B, fig 18 be the right

Fig. 18.



Inside Cylinders.—Relative positions of Counterweights in wheels.

and left hand cranks, inside elevation, respectively in horizontal and vertical positions; then the counterweight A′ for the right hand wheel lies in the direction c a, at 18½° from the center line c A, diverging from the crank B; and the counterweight B′ for the left hand wheel lies in the line c b, 18½° from the center line c B. Thus the two counterweights, on the opposite sides of the engine, *incline* towards each other when seen in side elevation, and their directions c a, c b, form an angle of 53° or less than a right angle by as much as twice 18½° or 37°.

The angle of divergence of the counterweight from the centre line of the crank, as found in the foregoing examples, is shown to be much greater, nearly three times, for inside cylinders than for outsides: obviously on account of the more nearly equal action of the reciprocating weights of each cylinder upon the wheels, in the former case, and though inside cylinder engines are more stable laterally than outsides, it is still of importance to apply counterweights, both to remove the fore and aft motions, and to reduce the internal wear of the mechanism.

Inside Cylinder Goods-Locomotives with coupled wheels.—Inside cylinder engines with coupled wheels, have always been remarkable for steadiness, as the cranks and coupling rods outside, balance approximately the pistons and connecting rods. The dimensions and relative positions of the inside and outside pieces, ought to be so combined as to balance correctly. As already pointed out for inside cylinders, the true direction of the counterweight from the center is not directly opposed to that of the crank, but at a considerable angle with its center line, dependent upon the relative widths apart of the wheels and cylinders, and such that in side elevation the two counterweights incline together; the outside cranks should then be set at the necessary angle to form a correct balance, and there is every freedom for doing so, whether the crank be formed within the wheel, or separately, as the wheel or the crank may be set in any position on the axle.

When the outside cranks are longer than the insides, the weight of the coupling rods, as well as of the cranks must be referred to the inside crank pin, to find their equivalent balancing weight.

When the bearings are inside, the coupling rods lie close to the wheels, and may be supposed to move in the same plane with them. With outside bearings the overhung cranks and rods are so much wider than the wheels, that their extra leverage must be allowed for; and their equivalent weight at the wheels is found by multiplying their whole weight, for one side, referred to the inside crank pin, by the width apart of the outside rods, and dividing by the width apart of the wheels.

When only four wheels are coupled, the balance requires to be helped with a little extra counterweight in the wheels; it may also be raised by making the outside cranks longer. When 6 wheels are coupled, there is an excess of balance, which may be neutralized by a back counterweight to each wheel.

In the four coupled wheel engines made by Gouin for the Orleans railway, the total moving weight on each inside crank is 597 lbs., the wheels are four feet seven inches apart centres, and the cylinders 2 feet six inches apart. The moving weight to be balanced is found in the way already described, to be divided into 441 lbs., and 156 lbs. for each wheel on the driving axle, the resultant of which is 467 lbs. requiring to be balanced at an angle of 19¼° with the center line of the inside crank. To make a perfect balance it thus appears that the outside cranks, which are equal in length to the inside ones, should be keyed at an angle of 20° with the direction of the inside cranks, and that the weight of the outside cranks referred to the crank pin and the coupling rod should be 467 lbs., supposing, as we may, that they act in the plane of the wheel. In reality their slump weight is but 353 lbs. or 114 lbs., short, and it is exactly opposed to the inside cranks; nevertheless, as the disturbing action is so materially reduced, these engines run with remarkable steadiness even at 45 miles per hour, with five feet wheels.

Crampton's Locomotives.—These engines are distinguished by the great length of their wheel base, which has in some examples been made 16 feet long, and in the Liverpool eighteen feet: also by the position of the driving axle behind the firebox, and by the great diameter of driving wheel, 7 to 8 feet. They are peculiarly steady at all speeds,—a result which is due jointly to their weight, the great distance apart of the axles—the leading and driving—which carry the greatest part of the weight, and by the reduced working velocity of the mechanism at given speeds on the rail.

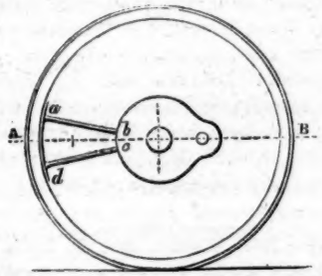
In Crampton's engines the whole of the working gear is placed close under the eye of the driver. The center of gravity of the machine, also is placed very low; and this is a condition on which great stress has been laid, and to which much of the stability of the engine is attributed. The height of the center of gravity we regard as practically a matter of indifference, for we have found high pitched engines, in point of stability, a match for any that have come under our notice. The position of the driving wheels in the rear is, we believe the only tangible cause of the superior stability of those engines, as the unbalanced action of the reciprocating weights, operating at the extremity of the machine, is completely controlled by the mass in front of the axle. This is, however in our view, a very questionable mode of doing what can be done as directly, and certainly more rationally, by the method of counterweights; for the great length of the wheel base, well loaded at each end, acts severely on the permanent way, in the passage along curves. Everything that has been gained by this over ordinary engines in point of stability, can be met by means of placing them in balance; and it should not be forgotten that every engine, Crampton's included, should be fitted with counterweights, not merely because external stability is desirable, but also because the

internal forces which tend to wear down any engine at work, should be as completely neutralized as possible. We are not sure but that had the "long boiler" engine been fitted with suitable counterweights, it would have remained in favor until this day, for it had much to recommend it, in the moderated wheel base for the easy passage of curves, and in the facilities for extending the heating surface, and increasing its evaporating value per foot of area, even with the same size of firebox.

Of the Distribution and Calculation of Counterweights.—Counterweights, like the other revolving masses in the engine, are referred to the crankpin, to find their equivalent balancing weight. As they are necessarily irregular in form, the following methods of finding the center of gravity are given:—

To find the Center of Gravity of a Counterweight in one Segment.—Let A B, fig 19, be the center

Fig. 19.



Driving Wheel and Counterweight in one Segment.

line through the crank, of the driving wheel to be balanced and *a b c d* the space to be filled, between two spokes opposed to the crank, and reaching from the nave to the rim. This space, done to a larger scale, fig. 20, is bisected by the center line

Fig. 20.

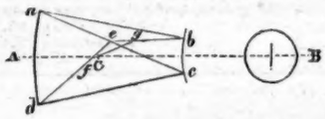
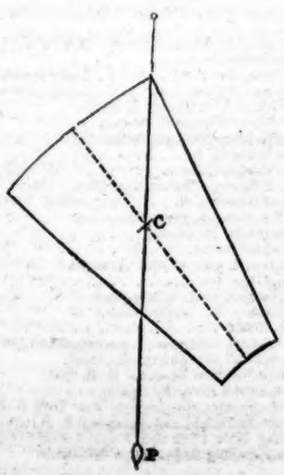


Diagram io find Center of Gravity of Counterweight.

A B. Draw *a c*, and bisect it at *e*; draw *d e* and *e b*, and set off on these lines one third of their lengths respectively, *e f* and *e g*; and draw *f g*. The point of intersection, C, of this line with the center l ne A B, is the center of gravity of the surface. So much for the geometrical process.

The center of gravity may be found also by cutting a templet of uniform thickness to the form of the surface, and freely suspending it by one of the corners, *a*, as in fig. 21; a plummet line P,

Fig, 21.

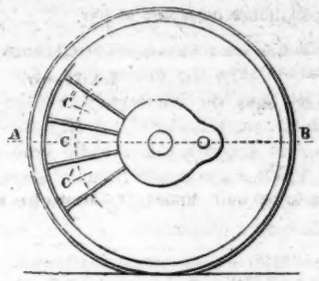


Mode of finding the Center of Gravity by Templet.

dropped from the same point of suspension in front of the templet, will intersect the center line at the center of gravity, c. Reverting to fig 19, and setting off the center of gravity of the space *a c*, thus found, it stands at 22 inches from the center of the wheel.

2*d. In Three Segments, fig.* 22—Find the cen-

Fig. 22.



Driving Wheel and Counterweights in three Segments.

tre of gravity C of one of the counterweights, as above, through C strike an arc from the center of the wheel, and crossing the center lines of the other segments at their centres C′, C″, as shown more distinctly in fig 23; draw C′ C″ meeting A B at D, and set off D E one third of the interval D C. Then E is the common center of gravity of the three segments, and is 20.82, or 20 13-16 inches from the centre of the wheel.

3*d. In two Segments, fig.* 24.—This is required when the crank is opposed to a spoke as in the figure. Find the center of gravity C, of one segment as before, and by an arc find the other center C′; draw C C′ cutting A B at D, the common center of gravity.

To be continued.

Saloon Cars.

The Albany Evening Journal gives a description of the new Saloon Cars making in Troy, for the Hudson River Railroad:—The "Saloon Car" is a most magnificent fixture—combining sociability and comfort to an extent never before approached in railroad arrangements. The body of the car is of the length and nearly a foot wider than those in ordinary use. It has a hall on the right hand side, about three feet wide, out of which four saloons open, capable of seating eight persons each, and one for four persons. In the larger saloons is a sofa, five chairs, a centre table and a magnificent mirror. The paneling is beautifully ornamented with landscape and other paintings; the windows and blinds are especially adapted for ventilation and for the exclusion of dust and cinders; and the whole is splendidly unique, neat and spacious. It is just what was needed for family and other parties, who, in their journeyings desire to be alone.

This "Saloon Car" will, we are quite sure be in great requisition. The fare will, of course, be more than in the ordinary cars, because it contains fewer seats. But those who can appreciate comfort, and have the means to pay for it, will cheerfully submit to the additional tax.

Independent of its novelty, the car (from the shop of Eaton and Gilbert, Troy) is a fine piece of mechanism. Only one is yet finished; but others are in progress, so, if required one can be attached to each train. And when they are so attached, we are confident they will be always filled. At all events, Mr. French, the superintendent of the Hudson River road, deserves the thanks of the travelling public for making the experiment.

'East.

Railroad Depot for the Eastern and Lowell Roads.—In the course of a week the work of constructing a new depot for the Eastern and Lowell railroad companies will be commenced. The building will occupy the entire square formed by Canal, Friend, Market and Traverse streets, being therefore very near the Boston and Maine depot. The entire length will be 322 feet, the width 145 feet, and the sides for a distance of 272 feet will be one story in height. The front, which, by the way, is on Market street, is to be three stories in height, and built of freestone. The rear part of the building will be of brick. The front will be 46 feet high, and the rear 41 feet. On the front of the building will be nine doors, and on either side, five doors and nine windows, which will be of Romanesque style of architecture. The roof will be constructed in a manner to admit the light on both sides, the entire length of the building. It will be of a different style from any other building in the city, and will combine strength, durability and beauty of architecture. The main part will be completed by the first of January next, but it is not probable that the building will be finished throughout until May or June next.

Northwestern Railway Company.

We learn from a late number of the Galena, Ill., Advertiser, that a railway company under this name was organized in that city lately for the purpose of building a road Northwestward, commencing at the mouth of the Tete des Morts, on the west bank of the Mississippi. The following officers were chosen:

Capt. H. H. Gear, of Galena, President; Hon. Ansel Briggs, of Iowa, Vice President; R. S. Morris, Esq., of Galena, Treasurer; E. R. Hooper, Esq., of Galena, Solicitor; G. M. Mitchell, Esq. of Galena, Secretary.

Directors—Henry Corwith, W. H. Bradley, E. B. Hooper, James Carter, S. W. McMaster, H. Newhall, Galena; Jona. Higgins, John D. Howard, Jos. Durge, J. G. Schaupp, Iowa.

Cleveland and St. Louis Railroad.

Two parties are in the field surveying the route of this road; one commencing at the Indiana State line in Mercer county, Ohio, and the other at the head of Walworth Run on the Cleveland, Columbus and Cincinnati railway. The party from Cleveland have progressed, we learn as far as Elyria, and have kept on a straight line entering that town a few hundred feet south of the Court House, The survey thus far is said to be very favorable, having light grades. The crossing of the valley of Rocky River is near General Mastics, at probably the most favorable point between its mouth and Berea. Explorations have been made from the Indiana State line to Lima, in Allen county; also from Elyria to Norwalk and the reports are favorable.—*Cleveland True Democrat.*

Drawing.

Alton and Chicago Railroad.

Another division of the above road, ultimately destined to connect the waters of the Mississippi at Alton, with those of Lake Michigan at Chicago, by almost an air line, has been opened to the public. It extends from Springfield to Lincoln station, near the county seat of Logan county, and about midway between the State Capitol and the city of Bloomington. The country through which this portion of the road passes, is unsurpassed in fertility and productiveness by any in the state, and being thickly settled, with an enterprising and industrious population, this extension of the road will doubtless be followed by an immediate and very perceptible improvement in its traffic. A region of country is now being penetrated by this road, which has heretofore been almost entirely dependent upon the fickle tide of the Illinois river, as a means of securing the transportation of its surplus produce to market. Consequently, it has been almost deprived of the advantage of a market during a good portion of every year, owing to the obstructions of that stream by low water, and the consequent increase in the cost of carriage.

Belleville and Murphysboro Railroad.

The Belleville and Murphysboro Railroad Company was organized on the 16th inst. at the city of Belleville, by the election of the following officers: Col. Lorenzo P. Sanger, President; Casper Thiel, Secretary; W. W. Roman, Treasurer; W. H. Snyder, Solicitor; and Jno. A. Logan Commissioner for procuring the right of way.

This Road connects Belleville with the Central Illinois Road, and through the Belleville and Illinoistown Road brings St. Louis also into the same connection. The survey of routes will be entered on immediately, and the work of construction will no doubt be prosecuted with vigor.

Canada.

Completion of the Richmond Railway.—We learn that it is more than probable the Richmond Railway will be completed before the winter sets in, and Quebec be thus in rapid communication with every great city on this continent. The road is made and the rails laid in many different places. Should the iron for the bridges and the requisite quantity of rails arrive in time, the road will undoubtedly be in traveling order by the middle of November.

Stanstead Railroad.

The friends of a railroad to connect Stanstead, Canada East, with the St. Lawrence Railroad at Montreal, and also with the Derby line, Vermont, assembled at Stanstead last week, Mr. Tirrell, M. P., presiding, and were addressed by Gov. Fairbanks of Vermont, N. B. Baker of Concord, N. H., Mr. Drummond, Attorney-General of Lower Canada, Engineer Hayward of Boston, Col. Yale, Geo. W. Kittredge of Newmarket, N. H., Messrs. Nesmith, of Franklin, N. H., Papin and Ostelle of Montreal, President Quincy of the Concord and Montreal road, F. B. Fay of Chelsea, Mayor Low of Concord, N. H., and others. It was decided that the railroad should be built by the winter of 1854, and members of the City Council of Montreal expressed the opinion that the city would subscribe $200,000 towards the project. The meeting adjourned to meet again when the road is completed.

Henderson and Nashville Railroad.

A contract has been concluded with the company which undertook the grading &c., for the road, to complete this whole work, including the purchase of iron, laying the rails, and building depots. The contractors furnish everything but the rolling stock, and have agreed to finish the road ready for use, for one-third in money, to take one-third of the stock themselves, and to take the remainder in bonds of the company at par.

Kennebec and Somerset Railroad.

The *Banner* says the contractors have commenced work upon the railroad bridge of the Kennebec and Somerset Railroad, crossing the Kennebec river at Augusta. It is to be built upon four piers, 175 feet apart, and running diagonally from shore to shore. The bridge is to be ready for the rails before winter.

Terre Haute and Alton Railroad.

Advices from Terre Haute give the most gratifying intelligence of the rapid progress of the above work. The bridge over the Wabash river is being pushed to completion with all possible dispatch. Sixty men and ten horses, sent from New York by Mr. Mattoon arrived at Terre Haute last week, and immediately joined those employed in grading the road westward towards Paris. A contract has just been closed with Mr. Seward, the energetic contractor at Hillsboro, for the grading of two additional sections, and he has now a large force at work on the road. A number of tracklayers have arrived.

Missouri--Pacific Railroad.

We are glad to learn that business of all kinds is daily increasing on the Pacific Railroad, live stock of different kinds is being brought in, and many articles of marketing, including, to-day, several barrels of fine Franklin county peaches.—The receipts, we understand, average about $200 per day. Lumber is beginning to go out, for improvements on the line of the road—and signs of business are every where manifesting themselves. *St. Louis News.*

Locomotive Building.

We learn from the Cleveland Plaindealer that the Cuyahoga Works, at Ohio city, near Cleveland, Ohio, have now sent out no less than 28 superior locomotives, every one of which has reflected honor on their builders, and have been admired by all who have seen them.

The "Indiana," a new engine, started recently from Cleveland, for the Bellefontaine and Indiana railroad, where she is to run. The engine was built under the direction of Mr. Rogers, sup't. and has 16 inch cylinder, 20 inch stroke, and five feet wheel. Her construction has been much simplified and she is well worthy the title of the "model engine." We have no doubt the Indiana will meet every expectation of the B. & I. company.

The Manchester Mirror contains a list of the names of twenty four locomotives which have been completed and sent from Manchester since the middle of May. Most of them were for the Western Market.

Cleveland and Erie Railroad.

On the 11th inst., the following gentlemen were re-elected officers of this road:

Alfred Kelley, President; Wm. Case, vice-president; G. B. Ely, secretary; Parker Handy, treasurer.

We learn that the prospects of the road are most flattering.

Tenacity of Lake Superior Iron.

The Detroit Tribune says they have in their office a shaving cut from a *cast* iron shaft made of Lake Superior iron by Messrs. Johnson, Wayne & Co. of Detroit. In its present twisted state it is *ten feet long*, and if straight would be *twenty feet*. Though shaved from a *cast* iron shaft, as we have said, it possesses the tenacity, and we believe the malleability too, of the best wrought iron. Shavings taken from the ordinary kind of iron break of their own weight when a foot or two long. But this is almost as smooth and free from cracks as though it had been taken from a shaft of lead in the same way and is much *tougher*.

Memphis and Louisville Railroad.

The Memphis Eagle and Enquirer gives an encouraging account of the prospect for the construction of this road, in which, as a continuation of our connections in the south-west, Baltimore has a very direct interest. Col. Trezerant and Col. Topp, active and influential friends of the enterprise, were out on the route, and their success in securing numerous and important individual subscriptions, have more than met their expectations. The county in which Memphis is situated, has made a corporate subscription of $300,000 to the road.

The Lake Erie, Wabash and St. Louis Railroad is being pushed forward with energy. A contract has recently been made for 10,000 tons of Winslow's Patent Compound Rail, for the road.

Notice to Contractors.

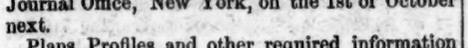
PROPOSALS for the Grading, Masonry and Bridging of portions of the Girard and Mobile railroad, will be received at the Railroad Journal Office, New York, on the 1st of October next.

Plans, Profiles and other required information will be furnished at that time. The entire length of the road is 225 miles; commencing at Girard, in Russell County, on the west bank of the Chattahirchu river, opposite Columbus, Ga., and running to Mobile, 52 miles south of Girard, is under contract, 23 miles nearly complete. The amount of subscription up to date is $2,766,000. The probable cost of the road is $4,000,000.

That portion of the line between Greenville and Mobile (115 miles) will be placed under contract as soon as the Mobile subscription of $1,000,600 becomes available.

ROBT. S. HARDAWAY, President.
GEO. S. RUNEY, Chief Engineer.
Girard Railroad Office, 6th July, 1853.

Notice to Contractors.



ST. LOUIS AND IRON MOUNTAIN RAILROAD.

PROPOSALS will be received at the office of Company in St. Louis, Mo., for the Graduation, Masonry and Bridging of that portion of the St. Louis and Iron Mountain Railroad included between St. Louis and the Iron Mountain, or Pilot Knob, distance about 84 miles. The preliminary surveys and approximate locations are now complete, and the final location for construction in rapid progress, and may be closed by the 1st Sept. Meanwhile, profiles and plans, now ready, will, with examination of the country, give all necessary data.

The work on this road is heavy, including three tunnels, and much rock work and masonry, about 20 miles of the road, shows "side-hill" work, and the balance heavy through work. The Iron Mountain is 700 feet above the river at St. Louis; but two principal depressions are to be crossed before reaching that height. The country passed through is healthy and well watered.

Proposals will be received (by quantities) for the whole or a part of the road, but contracts will only be made with responsible parties. No contracts will be closed before the 15th of August, and no sooner thereafter than satisfactory offers are received from responsible parties. The road will hereafter be extended to the Arkansas line, to connect with the Cairo and Fulton road, and a branch to the Mississippi River, at Cairo or new Madrid, is also contemplated.

WM. M. M'PHERSON, Pres't.
THOS. S. O'SULLIVAN, Consulting Engineer.
J. H. MORLEY, Eng. in Charge.
4w. St. Louis, July 21, 1853.

BRANDS' LIQUID,

FOR DISSOLVING AND PREVENTING

INCRUSTATIONS IN STEAM BOILERS,

IS acknowledged by all who have used it, to be the best preventive ever introduced to the notice of the public. It is not injurious to the Boilers, even if used in large quantities, and is now in general use in a great part of Europe, on Railroads and Steamboats, and for Stationary Boilers.

By the use of this liquid, old incrusted boilers, and principally tubular boilers, which from their construction are in general very difficult and in some cases impossible to be cleaned, may be freed from incrustation in a few days, and by the continued use of it kept entirely free from any future accumulation, thereby increasing the generation of steam, reducing the consumption of fuel and diminishing the danger of explosions.

The proprietors of Brands' Liquid are so confident of the merits of this invention, that they offer one barrel *gratis* to parties willing to make a trial, and to be paid for only in case of success.

Directions for the use of Brands' Liquid, with testimouials, together with full particulars, may be obtained from the Agents,

Messrs. BOURRY & ROEDER,
Consulting and Mechanical Engineers,
333 Broadway, N. Y.

Aug. 10, 1853.

N. York and N. Haven R. R.

NOTICE OF SUMMER ARRANGEMENTS,

Commencing Monday, May 9, 1853.

TRAINS FROM NEW YORK.	TRAINS TO NEW YORK.
7 A. M.—Accommodation to New Haven.	5.30 A.M.—Special, from Port Chester.
8 A. M.—Express for Boston, stopping at Stamford and Bridgeport.	5.00 A.M.—Commutation from New Haven.
9.10 A.M.—Special for Port Chester.	6.15 A.M.—Accommodation fm New Haven.
11.30 A.M.—Accommodation for New Haven.	8.15 A.M.—Accommodation fm New Haven.
3·00 P.M.—Express for New Haven, stopping at Stamford, Norwalk and Bridgeport.	9.35 A.M.—Express from New Haven, Stopping at Bridgeport, Norwalk and Stamford.
4.00 P.M.—Accommodation for New Haven.	1·07 P.M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.
5.00 P.M.—Express for Boston, stopping at N. Haven.	4.00 P.M.—Special, from Port Chester.
5.35 P.M.—Commutation for N. Haven.	4.00 P.M.—Accommodation fm New Haven.
6.30 P.M.—Special for Port Chester.	9.30 P.M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.

GEORGE W. WHISTLER, Jr., Sup't.
New Haven, May, 1853.

SIXTY MILES DISTANCE SAVED!—ONLY THIRTY-SIX AND A HALF HOURS TO CHICAGO.

MICHIGAN SOUTHERN RAILROAD LINE, carrying the Great Western U. S Through Mail—FOR CHICAGO AND ST. LOUIS, MILWAUKEE, RACINE KENOSHA, and all Ports on Lake Michigan.—Through from Buffalo to Monroe IN FOURTEEN HOURS WITHOUT LANDING.

The following magnificent and unequalled steamers from the line between Buffalo and Monroe:

EMPIRE STATE. J. WILSON, Commander, leaves Buffalo Mondays and Thursdays.

SOUTHERN MICHIGAN, A. D. PERKINS, Commander, leaves Buffalo Tuesdays and Fridays.

NORTHERN INDIANA, I. T. PHEATT, Commander, leaves Buffalo Wednesdays and Saturdays.

One of the above splendid steamers will leave the Michigan Southern Railroad Line Dock, at 9 o'clock, P. M. every day, (except Sundays) and run direct through to Monroe without landing, in 14 hours, where the Lightning Express Train will be in waiting to take passengers direct to Chicago in 8 hours; arriving next evening after leaving Buffalo.

THE LAKE SHORE RAILROAD,

runs in connection with this line, forming the only continuous line of Railroad to Chicago and the Illinois River.

For Through Tickets, by New-York and Erie and Buffalo and New-York City Railroad via Buffalo, or by the People's Line of Steamboats, Hudson River Railroad via Albany and Buffalo, apply to

JOHN F. PORTER, Agent,
No. 193 Broadway, corner Dey-st., N. Y.

GREAT WESTERN MAIL LINE.—SIXTY MILES DISTANCE SAVED, by taking the MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD.—Through tickets for Chicago, St. Louis, Milwaukee, Racine, Kenosha, Waukegan, and Sheboygen, by New York and Erie Railroad via Dunkirk, and Buffalo and New York City Railroad; People's Line of Steamboats, Hudson River Railroad, via Buffalo, connecting at Buffalo with the splendid steamers EMPIRE STATE, J. WILSON, Commander, Mondays and Thursdays; SOUTHERN MICHIGAN, D. PERKINS, Commander, Wednesdays and Saturdays; NORTHERN INDIANA, I. T. PHEATT, Commander, Tuesdays and Fridays; leaving Buffalo every evening (Sundays excepted.) These steamers are low pressure, built expressly for the Lake trade, and for finish, speed, strength and safety, have no superiors anywhere.

The connections with the Express Trains at Toledo and Monroe, for Chicago and St. Louis, are perfect, and can be relied upon.

Forty hours from New York to Chicago. Time and money saved by taking this Line.

Passengers preferring it, can take the Lake Shore Railroad to Toledo, the Michigan Southern and Northern Indiana Railroad to Chicago, thence by the Rock Island Railroad to La Salle, forming the only continuous line of Railroad to the Illinois river.

For through tickets or freight apply to
JOHN F. PORTER, Agent, 193 Broadway, cor. Dey st.

New York and Erie R. R.

PASSENGER TRAINS leave Pier foot of Duane street, as follows, viz:—

DAY EXPRESS, at 6 a. m. for Buffalo direct, over the N. Y. and E. R. R., and the Buffalo and N. York City R. R., without change of baggage or cars; and also for Dunkirk.

MAIL, at 8 a.m. for Dunkirk and Buffalo, and all intermediate stations. Passengers by this train will remain over night at any station between Susquehanna and Corning, and proceed the next morning.

ACCOMMODATION, at 12½ p.m. for Delaware and all intermediate stations.

WAY, at 3½ p.m. for Delaware and all intermediate stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.

EMIGRANT, at 7 p.m. for Dunkirk and all intermediate stations.

On Sundays only one Express Train—at 6 p.m.

The Express Trains connect at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Chicago, etc., and at Buffalo with first class splendid steamers for Cleveland, Sandusky, Toledo, Detroit and Chicago.

CHAS. MINOT, Sup't.

$1,000,000 Loan

$1,000,000 LITTLE MIAMI RAILROAD COMPANY 6 PER CENT FIRST MORTGAGE BONDS FOR SALE.

OFFICE OF WINSLOW LANIER & Co.,
No. 53 Wall st., June 18, 1852

THE LITTLE MIAMI RAILROAD COMPANY offer for sale ONE MILLION of their SIX PER CENT BONDS, with Coupons, Interest and Principal payable in New York, the former half-yearly, 1st of November and 1st of May.

They are in sums of $1,000 each, payable 1st of May, 1883.

These Bonds are issued under express authority of the Legislature of the State of Ohio; are a part of the $1,500,000 Loan authorized to be issued by a vote of the stockholders, for the purpose of raising means to make a double track; the greatly increased and increasing business of the road makes this absolutely necessary.

The Little Miami Railroad is eighty-four miles long, commencing at the City of Cincinnati and terminating at Springfield; is now in complete running order; has cost, including equipments, stations, station houses, &c., up to this date, $2,-708,109 19.

This Company own stock in the Columbus and Xenia Railroad Company to the amount of $386,-000, which now commands a premium of 20 per cent. Also in the Hillsborough Road, to the amount of $11,716.

The receipts of the Road have been as follows:

For the year ending—

December 1, 1844	$18,632 26
December 1, 1845	46,327 58
December 1, 1846	116,052 02
December 1, 1847	221,139 52
December 1, 1848	280,085 78
December 1, 1849	321,398 82
December 1, 1850	405,597 24
December 1, 1851	487,845 89
December 1, 1852	526,746 35
The receipts from Dec. 1 to May 1, (last 5 months)	260,051 27
For the same time the year before	172,281 18
Increase in 5 months	$87,770 09

The position of this road being the natural, shortest and most usually travelled route from Cincinnati and the vast country south and west of it, to the northern cities, must ever make it one of the most important and profitable lines in the country.

An inspection of a map will show its connections to be many and important. This road operates the Columbus and Xenia road, and runs in connection with the Cleveland and Columbus road, in fact they are now run as one line, greatly to the advantage of all.

Regular annual 10 per cent. dividends have been declared since December, 1847, with an extra dividend of five per cent in 1851. In 1852 two cash dividends, each 10 per cent, were made.

The present surplus and reserved fund amounts to $98,546 16.

The mortgage covers the entire line of road costing to date $2,708,109 19
To be expended on double track, &c. 1,500,000 00

Value of security $4,208,109 19

The security for the payment of these Bonds is of the most ample character, being a first and only mortgage or deed of trust (excepting one of $100,-000 to the city of Cincinnati) on the Company's Road, Stations, Franchises, net income, &c., to J. F. D. Lanier, Esq., of this city, in trust for the Bondholders, with ample power to take possessio of the road, its real and personal estate, franchise &c., and to sell the same to the highest bidde for cash, if default be made in payment of interes or principal. This mortgage is for $1,500,000, and cannot be increased.

The Stock owned by the Road in the Columbus and Xenia and Hillsborough Railways will much more than pay off the $100,000 prior lien to the

city of Cincinnati, and all other debts of the Company, except this loan of $1,500,000.

SEALED PROPOSALS will be received for any sum not less than $1,000, until Thursday, the 1st of September next, at 3 o'clock P. M.

Proposals will be addressed to WINSLOW, LANIER & Co., Agents of the Company, No 52 Wall st., New York, indorsed "Proposals for the Little Miami Railroad Bonds."

One-half the purchase money will be required to be paid at the time of accepting the bids, the residue in thirty and sixty days. Any purchaser will be at liberty to pay in full at once.

Interest on the Bonds will run from the day of payment.

The above $1,000,000 will be sold absolutely and without reserve to the highest bidder.

For further information apply at our office.

WINSLOW, LANIER & Co.

Notice to Contractors.

BUFFALO & PITTSBURGH RAILROAD—Sealed proposals will be received at the Engineer's Office, in the city of Buffalo, until the first day of September next, for the graduation, masonry, and for the entire construction of the line of road, (about 20 miles,) between Ellicottville and the Pennsylvania State Line, in the valley of the Tunungwant.

Plans and Specifications will be ready for inspection at the office of the Engineer on and after the 20th day of August inst. The proposals may be made for the grading masonry, ties, fencing and entire construction in a single proposition, or for the same and all items separately and in independent propositions; and proposals as above for a single section or any number of sections will be received; the Company reserving the right to reject such propositions as are not satisfactory. Proposals willalso be received in like manner, for the balance of the road from Ellicottville to the city of Buffalo, distance about 50 miles, up to the 20th day of September. Plans and specifications for which will be ready for examination at the office of the Engineer from and after the 10th day of Sept. next.

Any further information desired may be obtained by addressing Hon. Orlando Allen, President of the Company, Buffalo.

Proposals are invited from contractors of ability for the whole road. Buffalo, August 2, 1853.

au4t31 E. R. BLACKWELL, Chief Engineer.

To Contractors.

NORTHERN INDIANA RAILROAD.

SEALED PROPOSALS will be received at the office of the Company in Toledo, Ohio, until the first day of September next, at noon, for grubbing and clearing, grading, bridging, superstructure and fencing of that section of the new line of said Road, from its junction with the Auburn and Eel River Railroad, to the town of Goshen, in Elkhart county, Ia., a distance of 51 miles. The line is divided into sections of about one mile containing from 7,000 to 65,000 yards of earthwork each, and in the aggregate about one million yards.—Proposals may be made for one or more sections, Maps and Profiles of the line, and plans and specifications of the work, may be examined at the office of the company in Toledo, on and after the 20th of August inst.

The directors reserve the right to accept or reject proposals, as they may deem the interests of the company to require.

J. H. SARGENT,
Asst. Chief Engineer.

Office of Nor Ind. R. R. Co.,
Toledo, August 4th, 1853.

India-Rubber Railroad Car Springs, etc.

THE UNITED STATES CAR SPRING COMPANY, having completed their new Factory, are manufacturing and furnishing to *Railroad Companies*, and *Car Builders*, *RUBBER SPRINGS* of the best quality, on the most favorable terms.

Also, McMullen's superior *WHITE HOSE*, not only for Railroads, but all other purposes, and of any size or thickness required. Office No. 25 Cliff street,

Aug. 10, 1853. 3m New York.

WHITE'S SUSPENSION BRIDGE, OF WOOD OR IRON.

A Model may be seen at the office of CHARLES T. GRIFFIN, *80 Broad St. N. Y.*

Length of span, anything short of 1,800 feet with perfect safety for every kind of travel. The above cut represents a Wooden Bridge with a roof. The arrangement for the Iron Bridge is such as to avoid all the bad effects of changes of Temperature. For a full description, see pamphlets; for further information, respecting models, rights, &c., apply, by letter or otherwise, to ASHEL WHITE, or JOSHUA F. THAYER, Proprietors, *Cambridgeport, Mass.*
Office next door to the Athenæum.

Notice to Contractors.

JEFFERSONVILLE RAILROAD.

SEALED Proposals will be received at the office of the Company at Jeffersonville, Indiana, until 10 o'clock, A. M., on Wednesday, the 7th day September, 1853, for the clearing, grading and bridging the road between Edinburg and Indianapolis.

Proposals may be made for sections, divisions, or the entire line, about 30 miles, payable in the 7 per cent mortgage bonds of the Company or part bonds and part cash, and also for payments entirely in cash.

The company reserves the right to accept such proposals as in their judgement will best secure the prompt construction of the road, and to reject all, if none are satisfactory.

The route traverses a fertile country, furnishing abundant supplies of all kinds, and the line is easy of access at all points.

Bidders will please give their post office address.

WILLIAM G. ARMSTRONG, President.
Jeffersonville, July 9, 1853.

Notice to Contractors.

THE UNDERSIGNED will receive proposals, at the railroad office in Indianapolis, to construct the Evansville, Indianapolis, and Cleveland Straight Line Railroad from Evansville to Indianapolis. The proposals will be for the whole line, 150 miles, more or less, or for either of the three sections of about 50 miles each. First from Evansville to the crossings of the Ohio, and Mississippi railroad in Davise's Co., ; second, from that point to Spencer, Owen county; Third, From that point to Indianapolis. The bid will be for the whole work the company finding the iron, chairs, and spikes), up to the rolling machinery, or for the earth and rock-work alone. The proposal will state what part of the pay will be received in real estate, bonds, and stock of the company.

O. H. SMITH, *President.*
WILLARD CARPENTER, *Vice President.*
Augt. 13, 1853.

Railroad Spikes.

THE Subscribers are manufacturing *Railroad Spikes* with SWETT'S *Patent Improved Machines;* and are prepared to execute orders for any quantity, on the most favorable terms. These Spikes are made of the *best* quality of iron, and, for *shape* and finish, are *superior* to any others. Railroad companies and others in want, are respectfully solicited to order a sample before purchasing elsewhere. All orders will receive prompt attention. SWETT, ELLIOT & CO.

Pittsburgh, Pa., August 25, 1853.

OFFICE CINCINNATI, HAMILTON and DAYTON Railroad Company.—Cincinnati, Aug. 9th, 1853.—The directors of this company have this day declared a dividend of five per cent. on their capital stock, payable to the stockholders registered in Cincinnati on demand, and to those registered in New York, on and after the 25th inst., at the office of the Ohio Life Insurance and Trust Company, in New York.

1m. FRANK S. BOND, Sec'y.

Book and Job Printing.

The undersigned have added to the PRINTING ESTABLISHMENT of the "RAILROAD JOURNAL," an extensive OFFICE for *BOOK AND JOB PRINTING*, which they are now prepared to execute in the BEST manner, and with DISPATCH. They respectfully solicit from RAILROAD COMPANIES, orders for the PRINTING of *Exhibits, Time-tables, Circulars, Tickets, &c., &c.*

J. H. SCHULTZ & CO.

New York April 9, 1853.